

# PACIFIC MOTOR BOAT

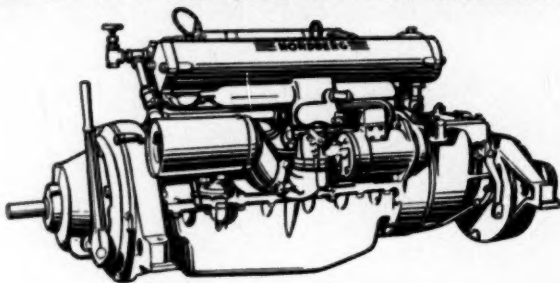


## Handbook NUMBER

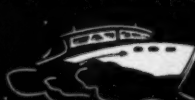


# NORDBERG GASOLINE MARINE ENGINES

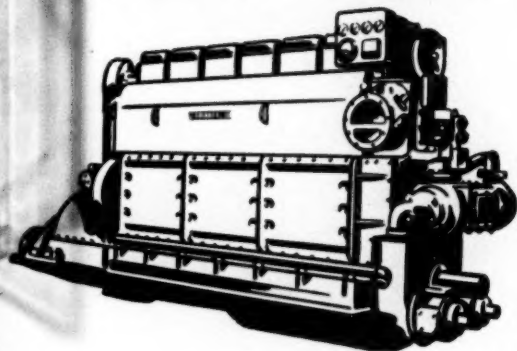
Four 6-cylinder models, all designed and built from stem to stern as full marine engines—with 7 main bearing crankshaft, and separate gear drives for generator and water pump... assuring greater reliability and safety. Available with sturdy front power take-off as shown, also with auxiliary pulley drives. Furnished for direct drive or with Nordberg designed



and built reverse and reduction gears in ratios of 4.12, 3.32, 2.44 and 1.88 to 1. Power range, 80 to 145 H.P.



# NORDBERG MARINE DIESEL ENGINES



Nordberg 4-cycle Marine Diesels, of the type illustrated, are designed for powering fishing vessels, tugs, towboats, work boats and larger yachts. Available in 9" x 11½", 13" x 16½" and 16" x 22" sizes, ranging from 220 to 1750 H.P., supercharged and non-supercharged, for direct or reduction gear drive. These rugged, compact Diesels pack plenty of dependable, low-cost power for the toughest

marine service. Other Nordberg Diesels are built in both two and four-cycle types in sizes from 10 H.P. to 9600 H.P. for marine propulsion or auxiliary service.

**NORDBERG MFG. CO • MILWAUKEE 7, WISCONSIN**

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| <i>Deck Shoes, denim, white and navy</i>        | 7.95 |
| <i>Sprayweight Yacht Caps, embr. emblem</i>     | 8.95 |
| <i>Striped Deck Shirts, short sleeves, from</i> | 2.50 |

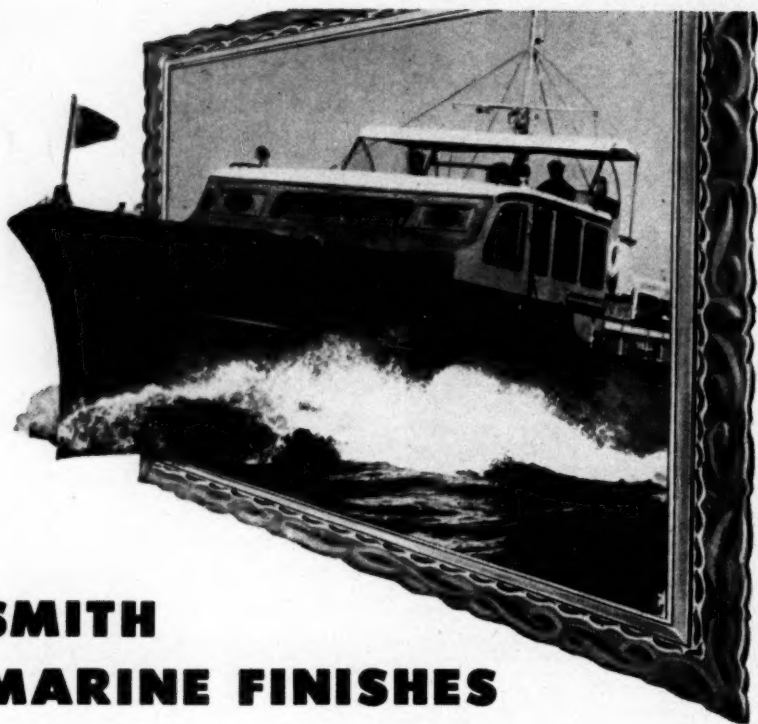
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booms, and bottoms.



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1951

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# Distances on the Pacific-1

*Distances in nautical miles from ports in British Columbia to ports on the west coast of the United States and in Alaska*

|                                   | Balboa,<br>Canal Zone | San<br>Francisco,<br>Calif. | Portland,<br>Oreg. | Cape<br>Flattery,<br>Wash. | Seattle,<br>Wash. | Tacoma,<br>Wash. | Hyder,<br>Alaska<br>(via<br>inside<br>route) | Ketchikan,<br>Alaska<br>(via<br>inside<br>route) |
|-----------------------------------|-----------------------|-----------------------------|--------------------|----------------------------|-------------------|------------------|--|--|
| Victoria, British Columbia.....   | 3,969                 | 745                         | 296                | 61                         | 70                | 90               | 629  | 596  |
| Vancouver, British Columbia.....  | 4,037                 | 813                         | 364                | 129                        | 125               | 145              | 586  | 553  |
| Nanaimo, British Columbia.....    | 4,040                 | 816                         | 367                | 132                        | 128               | 148              | 560  | 527  |
| Prince Rupert, British Columbia.. | 4,427                 | 11,220                      | 1,822              | -----                      | 573               | 593              | 122  | 90   |

<sup>1</sup>Via Dixon Entrance and Brown Passage; subtract 115 miles for distances via Hecate Strait.

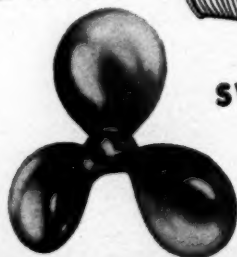
NOTES:—For distances from British Columbia ports to other ports in Alaska, add distances from the former to Ketchikan in this table and the distances from Ketchikan to the other Alaskan ports is given in Table 2.

To obtain the distance from a port in British Columbia to a port on the Pacific coast of the United States south of Cape Flattery, add distances to Cape Flattery in this table and in Table 3.

Distances from ports in British Columbia to Alaskan ports, via Strait of Juan de Fuca and thence outside may be obtained by adding distances to Cape Flattery in this table to distances from Juan de Fuca entrance to Alaskan ports as given in Table 2.

SOURCE: Distances Between U. S. Ports. 1938. U. S. Coast & Geodetic Survey.

UP TO 60"



**MICHIGAN**  
*MACHINED-PITCH*  
**PROPELLERS**

**SWITCH**

**TO**



**BEACH**

**THAT BUCKET**

Ever feel that you aren't getting the proper push from your propeller—that you're "towing a bucket?"

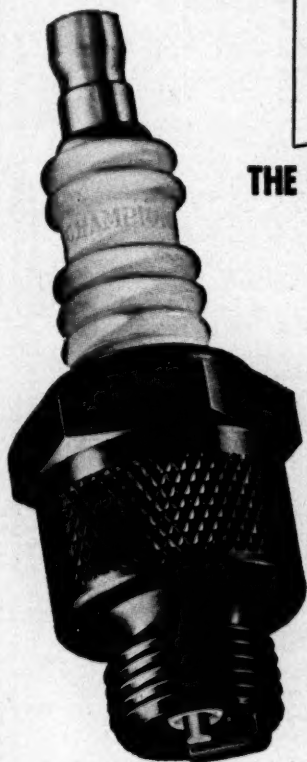
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GOLD CUP  
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SLO-MO-SHUN'S MILE RECORD  
GRAND CANYON ECONOMY RUN  
AND HUNDREDS OF OTHER WINS!**

**BEST IN OPEN COMPETITION  
PROVES CHAMPIONS ARE BEST  
FOR EVERY ENGINE**

**CHAMPION SPARK PLUG COMPANY, TOLEDO 1, OHIO**



# Distances on the Pacific-2

Distances in nautical miles between ports in Alaska and from Alaskan ports to Seattle, Portland, and San Francisco

| To— |  | From— |     | Ketchikan | Hyder | Wrangell | Petersburg | Juneau | Skagway | Sitka | Cape Spencer | Yakutat | Cordova | Valdez | Latouche | Seward | Seldovia | Anchorage | Kodiak | Uyak  | Chignik | Unga  | False Pass | Unalaksa | Unimak Pass, 5 miles<br>Batchelor Light-house | St. Paul Island | Nome  | Point Barrow | Seattle (inside) | Juan de Fuca, entrance | Columbia River en-<br>trance | San Francisco Bay |  |
|-----|--|-------|-----|-----------|-------|----------|------------|--------|---------|-------|--------------|---------|---------|--------|----------|--------|----------|-----------|--------|-------|---------|-------|------------|----------|---|-----------------|-------|--------------|------------------|------------------------|------------------------------|-------------------|--|
|     |  | 143   | 229 | 258       | 115   | 86       | 115        | 224    | 306     | 1,225 | 314          | 453     | 701     | 713    | 704      | 737    | 825      | 933       | 816    | 882   | 1,040   | 1,116 | 1,245      | 1,360    | 1,308   | 1,542           | 1,935 | 2,444        | 567              | 707                    | 1,191                        |                   |  |
|     |  | 86    | 229 | 258       | 40    | 115      | 258        | 367    | 449     | 1,568 | 457          | 596     | 844     | 856    | 847      | 880    | 968      | 1,096     | 959    | 1,025 | 1,183   | 1,259 | 1,388      | 1,503    | 1,451   | 1,685           | 2,078 | 2,587        | 667              | 707                    | 1,276                        |                   |  |
|     |  |       |     |           |       |          |            |        |         |       |              |         |         |        |          |        |          |           |        |       |         |       |            |          |   |                 |       |              |                  |                        |                              |                   |  |
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|     |  |       |     |           |       |          |            |        |         |       |              |         |         |        |          |        |          |           |        |       |         |       |            |          |   |                 |       |              |                  |                        |                              |                   |  |
|     |  |       |     |           |       |          |            |        |         |       |              |         |         |        |          |        |          |           |        |       |         |       |            |          |   |                 |       |              |                  |                        |                              |                   |  |
|     |  |       |     |           |       |          |            |        |         |       |              |         |         |        |          |        |          |           |        |       |         |       |            |          |   |                 |       |              |                  |                        |                              |                   |  |
|     |  |       |     |           |       |          |            |        |         |       |              |         |         |        |          |        |          |           |        |       |         |       |            |          |   |                 |       |              |                  |                        |                              |                   |  |
|     |  |       |     |           |       |          |            |        |         |       |              |         |         |        |          |        |          |           |        |       |         |       |            |          |   |                 |       |              |                  |                        |                              |                   |  |
|     |  |       |     |           |       |          |            |        |         |       |              |         |         |        |          |        |          |           |        |       |         |       |            |          |   |                 |       |              |                  |                        |                              |                   |  |
|     |  |       |     |           |       |          |            |        |         |       |              |         |         |        |          |        |          |           |        |       |         |       |            |          |   |                 |       |              |                  |                        |                              |                   |  |
|     |  |       |     |           |       |          |            |        |         |       |              |         |         |        |          |        |          |           |        |       |         |       |            |          |   |                 |       |              |                  |                        |                              |                   |  |
|     |  |       |     |           |       |          |            |        |         |       |              |         |         |        |          |        |          |           |        |       |         |       |            |          |   |                 |       |              |                  |                        |                              |                   |  |
|     |  |       |     |           |       |          |            |        |         |       |              |         |         |        |          |        |          |           |        |       |         |       |            |          |   |                 |       |              |                  |                        |                              |                   |  |

Notes.—Distances from ports in southeast Alaska (except Sitka) to ports in western Alaska are via inside route to Cape Spencer.

Distances from ports east of the Alaska Peninsula to Unalak are via Akutan Pass; to other ports north of the peninsula they are via Unimak Pass.

Distances to Seattle (inside) are via inside route to Cape Spencer.

Distances to Latouche from points eastward are via Cape Hinchinbrook.

1 Via Summer Strait and Cape Ommaney.

2 Via Peril Strait.

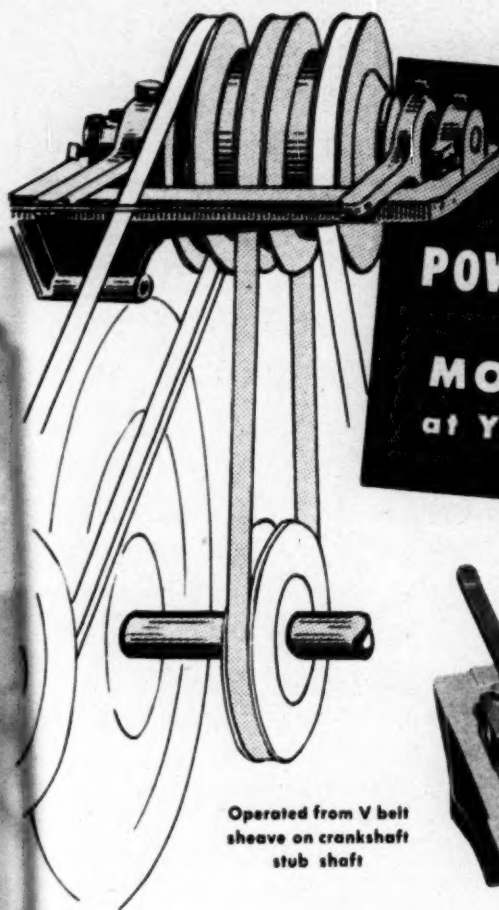
3 Via Cape Hinchinbrook.



# Distances on the Pacific-3

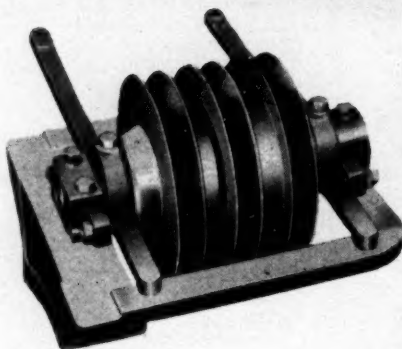
Distances in nautical miles between ports on the Pacific coast of the United States

| From—                              | To—                                | San Diego | Los Angeles Harbor | Santa Barbara | Richardson Rock, 5.0 miles 225° | Port San Luis | Monterey | San Francisco Bay entrance, 1.0 mile 225° true from lights | San Francisco (Ferry Bldg.) | Stockton | Eureka, Humboldt Bay | Crescent City | Port Orford | Marshfield, Coos Bay | Gardiner, Umpqua River | Florence, Siuslaw River | Newport, Yaquina Bay | Tillamook Bay entrance, 0.5 mile 270° true from lights | Astoria | Longview | Vancouver | Portland | South Bend, Willapa Bay | Aberdeen, Grays Harbor | Cape Flattery, 2.7 miles 325° true from lighthouse |
|------------------------------------|------------------------------------|-----------|--------------------|---------------|---------------------------------|---------------|----------|--|-----------------------------|----------|----------------------|---------------|-------------|----------------------|------------------------|-------------------------|----------------------|--|---------|----------|-----------|----------|-------------------------|------------------------|--|
| San Diego, Calif.                  | San Diego, Calif.                  | 93        | 172                | 196           | 209                             | 309           | 309      | 436  | 453                         | 522      | 651                  | 700           | 759         | 814                  | 820                    | 849                     | 878                  | 934  | 968     | 1,031    | 1,065     | 1,070    | 1,014                   | 1,027                  | 1,102  |
| Los Angeles Harbor, Calif.         | Los Angeles Harbor, Calif.         | 93        | 87                 | 121           | 175                             | 284           | 284      | 351  | 368                         | 437      | 566                  | 615           | 674         | 729                  | 744                    | 761                     | 793                  | 849  | 883     | 899      | 946       | 980      | 985                     | 929                    | 942  |
| Santa Barbara, Calif.              | Santa Barbara, Calif.              | 172       | 87                 | 52            | 92                              | 201           | 201      | 270  | 287                         | 350      | 483                  | 532           | 591         | 646                  | 661                    | 678                     | 710                  | 766  | 802     | 816      | 865       | 899      | 902                     | 846                    | 859  |
| Richardson Rock, Calif.            | Richardson Rock, Calif.            | 196       | 121                | 52            | 68                              | 177           | 177      | 245  | 262                         | 331      | 461                  | 511           | 570         | 624                  | 639                    | 656                     | 687                  | 743  | 777     | 794      | 841       | 875      | 828                     | 840                    | 911  |
| Port San Luis, Calif.              | Port San Luis, Calif.              | 209       | 175                | 121           | 68                              | 121           | 121      | 189  | 206                         | 275      | 403                  | 452           | 511         | 566                  | 581                    | 598                     | 630                  | 686  | 721     | 736      | 784       | 818      | 832                     | 770                    | 835  |
| Monterey, Calif.                   | Monterey, Calif.                   | 309       | 284                | 201           | 177                             | 121           | 121      | 80   | 97                          | 166      | 293                  | 342           | 401         | 456                  | 471                    | 488                     | 520                  | 576  | 612     | 629      | 675       | 709      | 712                     | 656                    | 746  |
| San Francisco Bay entrance, Calif. | San Francisco Bay entrance, Calif. | 436       | 351                | 270           | 245                             | 189           | 80       | 17   | 86                          | 216      | 342                  | 392           | 451         | 510                  | 525                    | 542                     | 574                  | 630  | 666     | 682      | 728       | 762      | 770                     | 699                    | 806  |
| San Francisco, Calif.              | San Francisco, Calif.              | 351       | 308                | 287           | 262                             | 201           | 97       | 17   | 75                          | 232      | 360                  | 410           | 469         | 528                  | 543                    | 560                     | 592                  | 648  | 684     | 700      | 746       | 780      | 783                     | 712                    | 820  |
| Stockton, Calif.                   | Stockton, Calif.                   | 522       | 437                | 356           | 331                             | 275           | 166      | 86   | 75                          | 302      | 432                  | 481           | 540         | 600                  | 615                    | 632                     | 664                  | 720  | 756     | 772      | 818       | 852      | 855                     | 783                    | 891  |
| Eureka, Calif.                     | Eureka, Calif.                     | 651       | 566                | 483           | 461                             | 403           | 293      | 216  | 232                         | 302      | 432                  | 481           | 540         | 600                  | 615                    | 632                     | 664                  | 720  | 756     | 772      | 818       | 852      | 855                     | 783                    | 891  |
| Crescent City, Calif.              | Crescent City, Calif.              | 700       | 615                | 532           | 511                             | 452           | 342      | 266  | 281                         | 352      | 482                  | 531           | 590         | 650                  | 665                    | 682                     | 714                  | 770  | 806     | 822      | 868       | 902      | 905                     | 833                    | 941  |
| Port Orford, Calif.                | Port Orford, Calif.                | 759       | 674                | 591           | 570                             | 511           | 401      | 325  | 340                         | 411      | 541                  | 590           | 650         | 710                  | 725                    | 742                     | 774                  | 830  | 866     | 882      | 928       | 962      | 965                     | 893                    | 1,001  |
| Marshfield, Oreg.                  | Marshfield, Oreg.                  | 814       | 729                | 646           | 624                             | 566           | 456      | 379  | 395                         | 465      | 595                  | 644           | 704         | 764                  | 779                    | 796                     | 828                  | 884  | 920     | 936      | 982       | 1,016    | 1,019                   | 947                    | 1,055  |
| Gardiner, Oreg.                    | Gardiner, Oreg.                    | 820       | 745                | 661           | 639                             | 581           | 471      | 394  | 410                         | 480      | 610                  | 659           | 719         | 779                  | 794                    | 811                     | 843                  | 899  | 935     | 951      | 997       | 1,031    | 1,034                   | 962                    | 1,070  |
| Florence, Oreg.                    | Florence, Oreg.                    | 846       | 761                | 678           | 656                             | 598           | 488      | 411  | 427                         | 497      | 627                  | 676           | 736         | 796                  | 811                    | 828                     | 860                  | 916  | 952     | 968      | 1,014     | 1,048    | 1,051                   | 979                    | 1,087  |
| Newport, Oreg.                     | Newport, Oreg.                     | 878       | 793                | 710           | 687                             | 630           | 520      | 442  | 459                         | 528      | 658                  | 707           | 767         | 827                  | 842                    | 859                     | 891                  | 947  | 983     | 999      | 1,045     | 1,079    | 1,082                   | 1,010                  | 1,118  |
| Tillamook, Oreg.                   | Tillamook, Oreg.                   | 934       | 849                | 765           | 743                             | 686           | 576      | 498  | 515                         | 584      | 714                  | 763           | 823         | 883                  | 898                    | 915                     | 947                  | 1,003  | 1,039   | 1,055    | 1,101     | 1,135    | 1,138                   | 1,066                  | 1,174  |
| Columbia River entrance, Oreg.     | Columbia River entrance, Oreg.     | 968       | 883                | 802           | 777                             | 721           | 612      | 532  | 549                         | 618      | 748                  | 797           | 857         | 917                  | 932                    | 949                     | 981                  | 1,037  | 1,073   | 1,089    | 1,135     | 1,169    | 1,172                   | 1,100                  | 1,208  |
| Astoria, Oreg.                     | Astoria, Oreg.                     | 984       | 899                | 816           | 794                             | 736           | 626      | 546  | 565                         | 635      | 765                  | 814           | 874         | 934                  | 949                    | 966                     | 998                  | 1,054  | 1,090   | 1,106    | 1,152     | 1,186    | 1,189                   | 1,117                  | 1,225  |
| Longview, Wash.                    | Longview, Wash.                    | 1,031     | 946                | 865           | 841                             | 784           | 675      | 596  | 612                         | 682      | 812                  | 861           | 921         | 981                  | 996                    | 1,013                   | 1,045                | 1,101  | 1,137   | 1,153    | 1,200     | 1,234    | 1,237                   | 1,165                  | 1,273  |
| Vancouver, Wash.                   | Vancouver, Wash.                   | 1,065     | 980                | 899           | 875                             | 818           | 709      | 630  | 646                         | 716      | 846                  | 895           | 955         | 1,015                | 1,030                  | 1,047                   | 1,079                | 1,135  | 1,171   | 1,187    | 1,234     | 1,268    | 1,271                   | 1,200                  | 1,308  |
| Portland, Oreg.                    | Portland, Oreg.                    | 1,070     | 985                | 902           | 880                             | 822           | 712      | 635  | 651                         | 721      | 851                  | 900           | 960         | 1,020                | 1,035                  | 1,052                   | 1,084                | 1,140  | 1,176   | 1,192    | 1,239     | 1,273    | 1,276                   | 1,205                  | 1,313  |
| South Bend, Wash.                  | South Bend, Wash.                  | 1,014     | 929                | 846           | 820                             | 760           | 650      | 571  | 588                         | 658      | 788                  | 837           | 897         | 957                  | 972                    | 989                     | 1,021                | 1,077  | 1,113   | 1,129    | 1,176     | 1,210    | 1,213                   | 1,142                  | 1,250  |
| Aberdeen, Wash.                    | Aberdeen, Wash.                    | 1,027     | 942                | 859           | 840                             | 779           | 669      | 590  | 607                         | 677      | 807                  | 856           | 916         | 976                  | 991                    | 1,008                   | 1,040                | 1,096  | 1,132   | 1,148    | 1,195     | 1,229    | 1,232                   | 1,161                  | 1,269  |
| Cape Flattery, Wash.               | Cape Flattery, Wash.               | 1,102     | 1,017              | 936           | 911                             | 853           | 746      | 666  | 683                         | 752      | 882                  | 931           | 991         | 1,051                | 1,066                  | 1,083                   | 1,115                | 1,171  | 1,207   | 1,223    | 1,270     | 1,304    | 1,307                   | 1,236                  | 1,344  |



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# Distances on the Pacific-4

Distances in nautical miles between ports on the Pacific coast of the United States

| From—                     | To—   | Cape Flattery 2.7 miles 325° true from lighthouse | Juanda Fuca entrance 5.5 miles 345° true from lighthouse | Anacortes | Bellingham | Blaine | Boundary Line (Lime Kiln) | Bremerton | Dupont | Eagle Harbor | Everett | Mukilteo | Olympia | Port Angeles | Port Gamble | Port Ludlow | Port Townsend | Point Wells | Seattle | Tacoma |
|---------------------------|-------|---|--|-----------|------------|--------|---------------------------|-----------|--------|--------------|---------|----------|---------|--------------|-------------|-------------|---------------|-------------|---------|--------|
| Cape Flattery             | ..... | 3   | 3  | 92        | 107        | 113    | 73                        | 132       | 153    | 123          | 115     | 111      | 109     | 63           | 103         | 99          | 87            | 111         | 124     | 144    |
| Juan de Fuca entrance     | ..... | 92  | 92   | 18        | 107        | 113    | 73                        | 132       | 153    | 123          | 115     | 111      | 109     | 63           | 103         | 99          | 87            | 111         | 124     | 144    |
| Anacortes                 | ..... | 107   | 107  | 36        | 37         | 37     | 28                        | 87        | 108    | 78           | 72      | 70       | 124     | 55           | 60          | 56          | 43            | 66          | 70      | 99     |
| Bellingham                | ..... | 113   | 113  | 25        | 28         | 14     | 14                        | 75        | 96     | 67           | 60      | 58       | 112     | 26           | 48          | 44          | 31            | 54          | 67      | 87     |
| Blaine                    | ..... | 73  | 73   | 37        | 37         | 14     | 14                        | 75        | 96     | 67           | 60      | 58       | 112     | 26           | 48          | 44          | 31            | 54          | 67      | 87     |
| Boundary Line (Lime Kiln) | ..... | 107   | 107  | 36        | 37         | 14     | 14                        | 75        | 96     | 67           | 60      | 58       | 112     | 26           | 48          | 44          | 31            | 54          | 67      | 87     |
| Bremerton                 | ..... | 113   | 113  | 25        | 28         | 14     | 14                        | 75        | 96     | 67           | 60      | 58       | 112     | 26           | 48          | 44          | 31            | 54          | 67      | 87     |
| Dupont                    | ..... | 153   | 153  | 73        | 87         | 102    | 102                       | 102       | 124    | 94           | 88      | 86       | 140     | 66           | 75          | 72          | 58            | 82          | 94      | 114    |
| Eagle Harbor              | ..... | 123   | 123  | 64        | 78         | 94     | 94                        | 102       | 124    | 94           | 88      | 86       | 140     | 66           | 75          | 72          | 58            | 82          | 94      | 114    |
| Everett                   | ..... | 115   | 115  | 36        | 36         | 13     | 13                        | 36        | 34     | 34           | 36      | 34       | 52      | 76           | 42          | 38          | 47            | 22          | 14      | 28     |
| Mukilteo                  | ..... | 111   | 111  | 34        | 34         | 13     | 13                        | 36        | 34     | 34           | 36      | 34       | 52      | 76           | 42          | 38          | 47            | 22          | 14      | 28     |
| Olympia                   | ..... | 109   | 109  | 28        | 28         | 13     | 13                        | 36        | 34     | 34           | 36      | 34       | 52      | 76           | 42          | 38          | 47            | 22          | 14      | 28     |
| Port Angeles              | ..... | 63  | 63   | 73        | 87         | 102    | 102                       | 102       | 124    | 94           | 88      | 86       | 140     | 66           | 75          | 72          | 58            | 82          | 94      | 114    |
| Port Gamble               | ..... | 103   | 103  | 94        | 108        | 124    | 124                       | 102       | 124    | 94           | 88      | 86       | 140     | 66           | 75          | 72          | 58            | 82          | 94      | 114    |
| Port Ludlow               | ..... | 99  | 99   | 58        | 72         | 88     | 88                        | 36        | 57     | 28           | 4       | 70       | 70      | 114          | 78          | 74          | 32            | 15          | 28      | 48     |
| Port Townsend             | ..... | 87  | 87   | 110       | 124        | 140    | 112                       | 36        | 57     | 28           | 4       | 70       | 70      | 114          | 78          | 74          | 32            | 15          | 28      | 48     |
| Point Wells               | ..... | 111   | 111  | 63        | 87         | 102    | 102                       | 76        | 96     | 66           | 61      | 58       | 114     | 48           | 48          | 44          | 32            | 15          | 28      | 48     |
| Seattle                   | ..... | 124   | 124  | 46        | 90         | 75     | 48                        | 42        | 62     | 33           | 26      | 23       | 78      | 48           | 48          | 44          | 32            | 15          | 28      | 48     |
| Tacoma                    | ..... | 144   | 144  | 85        | 99         | 72     | 44                        | 38        | 55     | 30           | 23      | 20       | 74      | 44           | 48          | 44          | 32            | 15          | 28      | 48     |
|                           | ..... | 87  | 87   | 29        | 43         | 58     | 31                        | 47        | 67     | 38           | 32      | 30       | 83      | 32           | 19          | 16          | 16            | 26          | 38      | 58     |
|                           | ..... | 111   | 111  | 52        | 66         | 82     | 54                        | 22        | 42     | 13           | 15      | 12       | 58      | 55           | 21          | 18          | 26            | 14          | 34      | 58     |
|                           | ..... | 124   | 124  | 65        | 79         | 94     | 67                        | 14        | 34     | 8            | 28      | 26       | 50      | 67           | 34          | 30          | 38            | 14          | 34      | 58     |
|                           | ..... | 144   | 144  | 85        | 99         | 114    | 87                        | 28        | 20     | 26           | 48      | 46       | 35      | 87           | 54          | 50          | 38            | 34          | 25      | 58     |

Distances to Olympia and Dupont are via Clavos Passage, except from Tacoma.

Distances to Tacoma are via Point Robinson.

For distances to Olympia via Nisqually Reach add 2½ miles, except Dupont.

For distances from all ports via Rosario Strait to boundary line off Potos Island, add 18 miles to distances abreast of Lime Kiln.

# RULES OF THE ROAD

## RULE OF GOOD SEAMANSHIP

Good seamanship is defined as the practice of every precaution which may be required by the ordinary practice of a prudent and careful navigator. The first requirement of good seamanship is obedience to rules of the road. Good seamanship requires the safe conduct of the vessel under ordinary rules or under the rule of special circumstances.

Each set of statutory rules for various navigable waters of the United States state the rule of good seamanship in the same words:

"Nothing in these rules shall exonerate any vessel, or the owner or master or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to carry a proper lookout, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case."

### International, Inland and Pilot Rules

Three sets of regulations for the prevention of collisions apply to vessels operating in Pacific Ocean, coastal and inland waters. These are the International Rules, Inland Rules and Pilot Rules. The first two are statutory, while the Pilot Rules are regulations established by the U. S. Coast Guard for navigating certain harbors, rivers and inland waters of the United States and its territories. These regulations may be obtained from the Coast Guard.

For many entrances to harbors, bays, and estuaries, specific lines of demarcation between the high seas and inland waters have been laid down. When not prescribed, the International Rules apply outside of a line approximately parallel with the general trend of the shore, drawn through the outermost buoy or other aid to navigation or any system of aids.

Waters wholly within a state may come under the jurisdiction of that state and in that case the federal Rules may not apply. In such case the navigation laws of the state will apply.

### Application of Rules

The Rules of the Road are designed to prevent collisions of vessels. These rules are applicable whenever danger of collision exists. These rules apply to all types of vessels when underway. A vessel is under way when she is not at anchor, or made fast to the shore, or aground. Under the various rules, a

"steam vessel" shall include any vessel propelled by machinery, and will be referred to in the following paragraphs as motor vessels.

### COMPARISON OF VARIOUS RULES

Rules of Inland Waters, International Rules, and Pilot Rules, have a surprising degree of uniformity in principle, despite numerous differences in detail. The following situations are treated as uniform:

1. Approaching motor vessels in good visibility are classified into three situations: meeting, overtaking, and crossing.

2. Approaching sailing vessels are classified and required to pass one another in accordance with their course in respect to the direction of the wind which propels them both.

3. The rules in fog are uniform in the following: All vessels are required to give notice of their approach by signals on the whistle, siren, or fog horn, and these signals must be given at frequent intervals. Vessels in fog must go at moderate speed, which has been defined as bare steerageway, or at such speed as will enable the vessel to come to a standstill in half the distance of visibility.

4. Nothing in the various Rules shall exonerate any vessel, or the owner or master or crew, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper lookout, or of the neglect of any precaution which may be required by the ordinary



practice of seamen, or by the special circumstances of the case.

5. The rules are alike in recognizing that situations may arise where specific rules will not work, and where departure from these rules is accordingly necessary.

The most important differences in the several sets of Rules are found in the use of whistle signals, both in clear and good weather, and in running and anchor lights and day signals required for various types of vessels in different jur-

isdictions. An accurate knowledge of the International, Inland, and Pilot Rules should be minimum equipment for officers of such vessels. Copies of the Pilot Rules may be obtained free of charge, from the Coast Guard.

It should be noted that an Act of Congress, April 25, 1940, amended the Inland Rules to some extent, principally in regard to lights required to be carried by every vessel propelled by machinery and not more than 65 feet in length except towboats and tugs.

## RIGHT OF WAY

### PRIVILEGE AND BURDEN

In setting forth the right-of way for motor craft, the various Rules designate the vessel which holds the right of way, under normal situations, as the privileged vessel. The privileged vessel is required to continue exactly as she is doing from the time risk of collision begins until the vessels are finally past and clear.

The court interpretation of holding course and speed has been held to be such course and speed as would normally have been followed by the privileged vessel in navigating in localities where changes in compass headings and speed are necessary.

The vessel which is required to take positive action to prevent collision is the burdened vessel, and under various situations the rules require the burdened vessel to keep clear, to avoid crossing ahead, and to reduce speed, stop or reverse.

Despite the initial requirement that the privileged vessel hold her course and speed, the Rules make it clear that she does not exercise this duty right into collision itself. As soon as it is apparent that collision will be inevitable if the privileged vessel continues to hold her course and speed, she is required to take action to avert collision.

### MEETING SITUATION

Two vessels are said to be meeting if their courses are substantially, or within a point or two of, opposite, or if, as in the case of a winding river, they will become opposite at the point where they meet, even though they may at first sight each other at right angles. In open water, under all Rules alike, meeting vessels are required to pass port to port, unless they are already so far to the

starboard of each other that they will clear on that side a safe distance without changing course. In order that they may pass safely port to port, a sufficient change of course to the right is required of both vessels, not in the jaws of collision, but at such a safe distance apart and a sufficient number of degrees to avoid even getting into dangerous proximity.

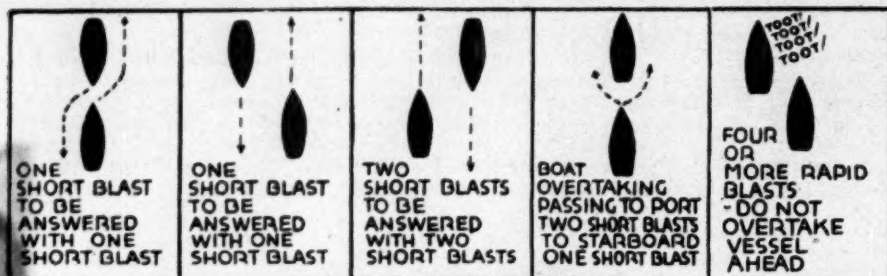
### CROSSING SITUATION

Two motor vessels are said to be crossing when one approaches the other on either side from a point or two in the bow or two points abaft the beam. A "point" as expressed here, is  $11\frac{1}{4}$  compass degrees.

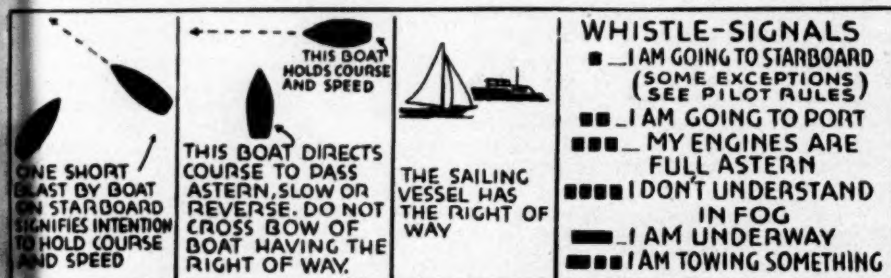
When two vessels are crossing, so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way of the other. In this instance, the burdened vessel must slacken her speed, stop, or reverse, or change her course to the right so that the danger of collision no longer exists. Risk of collision can be said to exist when the relative compass bearing of an approaching vessel does not appreciably change.

Under Inland and Pilot Rules in the crossing situation, the privileged vessel (the vessel which has the other on her port side) signifies her intention to hold her course and speed by one short blast of the whistle, which the burdened vessel answers by a short blast of the whistle. If, when two vessels are approaching each other, either vessel fails to understand the course and intention of the other, from any cause, the vessel so in doubt shall immediately signify the same by giving several short and rapid blasts, not less than four, of the whistle, which is the danger signal.

# Situations from the Pilot Rules



Left to right: 1. Approaching head on, both alter course to the right and pass on port side. 2. Both vessels passing to port, ruleable here, each pilot having signaled his intention. 3. Passing to starboard, ruleable here after each pilot has signaled his intention. 4. Overtaking vessel may



pass to starboard or port after the necessary signals are given, with the assent of the overtaken vessel. 5. Two vessels approaching at right angles in such a manner as to involve risk of collision. FOR COMPLETE RULINGS SEE YOUR COPY OF PILOT RULES.

## OVERTAKING SITUATION

An overtaken vessel is one going in the same direction, or within six points ( $67\frac{1}{2}^\circ$ ) of the same direction, as a slower vessel ahead. The rules are uniform in recognizing that the leading vessel was there first, and that the overtaking vessel must take positive action to keep clear of her as long as the risk of collision remains. It is a situation of privilege and burden, with the accompanying obligations of the privileged vessel to keep her course and speed, and of the burdened vessel to take all the positive action necessary to keep clear. This principle of privilege and burden is common to all sets of Rules, not only in the overtaking situation but when two steam vessels are crossing, when a steam vessel meets a sailing vessel, and when one ordinary sailing vessel approaches another. A sailing vessel, which under all other conditions has the right of way over motor vessels, is the burdened vessel if overtaking a motor vessel, and must keep clear.

## FISHING VESSELS

Sailing vessels under way shall keep out of the way of sailing vessels or boats fishing with nets, lines, or trawls. This Rule shall not give to any vessel or boat engaged in fishing the right of obstructing a fairway used by vessels other than fishing vessels or boats.

## SAILING OVER MOTOR VESSELS

When a motor vessel and a sailing vessel are proceeding in such directions as to involve risk of collision, the motor vessel shall keep out of the way of the sailing vessel. However, if a vessel is proceeding by sail and motor, it shall be considered a motor vessel.

## SAILING VESSELS

When two sailing vessels are approaching one another, so as to involve risk of collision, one of them shall keep out of the way of the other. A vessel which is running free shall keep out of the way of a vessel which is closehauled. A vessel which is closehauled on the port





# *Straight Steers* by Skipper

Suffering catfish! This engine's not in any shape for a fishing trip next week. The sight of those worn cylinders and gummy piston rings would scare Neptune himself. And it hasn't been long since the last overhaul—

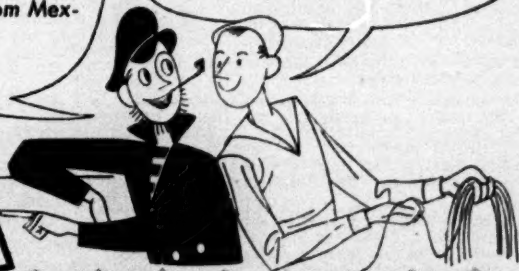
Aye, Mate, it's not a pretty picture. But you can't blame your engine. Look close down there and you'll see that your lubricant hasn't done the job it should. Fine engines like this need New RPM Motor Oil. It scuttles carbon, corrosion and rust.



Take my advice, Mate, and give New "RPM" a try. It doubles engine life between overhauls due to lubrication because it cuts in half the wear rate of piston rings and cylinder walls. You can get it at any of the 273 Standard Marine Stations from Mexico to the Aleutians.

Sounds like a straight steer to me, Skipper. Proper lubrication not only keeps the fun in cruising—it cuts costs, too. From now on I'm going to chart my course with New RPM Motor Oil!

**STANDARD  
MARINE PRODUCTS**



**STANDARD OIL COMPANY OF CALIFORNIA**

CHEVRON CARBOLINE STANDARD DIESEL FUELS RPM GELD OILS RPM MOTOR OIL  
RPM GREASES RPM OUTBOARD MOTOR OIL RPM OUTBOARD GEAR LUBRICANT

U.S. CHEVRON—RPM—RPM GELD. REG. U.S. PAT. OFF.

tack shall keep out of the way of a vessel which is closehauled on the starboard tack. When both are running free, with the wind on different sides, the vessel which has the wind on the port side shall keep out of the way of the other. When both are running free, with the wind on the same side, the vessel which is to the windward shall keep out of the way of the vessel which is to the leeward. A vessel which has the wind aft shall keep out of the way of the other vessel.

A sailing vessel is said to be on the starboard tack when the wind comes in on the starboard side.

Sailing vessels and vessels running under sail do not use whistle signals to indicate their course of action.

### FOG SIGNALS

In fog, mist, falling snow, or heavy rain storms, whether by day or night, the following sound signals shall be given:

A motor vessel under way shall sound on her whistle at intervals of not more than one minute, a prolonged blast.

A sailing vessel under way shall sound on her fog horn at intervals of not more than one minute, when on the starboard tack, one blast; when on the port tack, two blasts in succession; and when with

the wind abaft the beam, three blasts in succession.

A vessel when at anchor shall, at intervals of not more than one minute, ring the bell rapidly for about five seconds.

A motor vessel when towing shall, at intervals of not more than one minute, sound three blasts in succession consisting of one prolonged blast followed by two short blasts. A vessel being towed may also give this signal.

### WHISTLE SIGNALS

A short blast of the whistle shall mean a blast of about one second's duration.

A prolonged blast of the whistle shall mean a blast of from four to six second's duration.

Steam vessels are forbidden to use "cross signals," that is, answering one whistle with two, and answering two whistles with one.

### GENERAL PRUDENTIAL RULE

In obeying and construing these rules due regard shall be had to all dangers of navigation and collision, and to any special circumstances which may render a departure from the above rules necessary in order to avoid immediate danger.

## Compass Pointers

A true course is the angle a ship's track makes with the true meridian.

A magnetic course is the angle a ship's track makes with the magnetic meridian.

A compass course is the course actually shown by the ship's compass influenced by variation and deviation, if there is any.

Variation is the angle at any place between the true and magnetic meridians or the amount the needle is pulled to the right or left of true north. It is the angle measured at the place of the observer between the earth's nearest true and magnetic poles.

Deviation of the compass is the error of the compass caused by magnetic influences within the ship and is the amount that the north point of the compass needle is pulled to the right or left of magnetic north.

Compass error is the algebraic sum of variation and deviation.

The lubber's line is a fine black line painted on the inner forward side of the compass bowl. Upon installation of the compass in the ship the lubber's line is carefully aligned parallel to the fore and aft line of the ship with reference to the center of the compass card.

Compass cards are usually graduated in degrees, from 0 to 360. The card may be also marked off in 32 points, the angle between two adjacent points being 11¼ degrees. Naming the 32 points of the compass starting at north and going around to the right is called "boxing the compass."

A compass deviation card is a table of remaining errors of compass deviation after the

compass has been installed and deviation errors compensated as much as possible.

Keep magnetic influences as far as possible from the compass. Wiring near the compass should have the negative and positive wires twisted together.

### RECOMMENDED COMPASS SIZES

| Length of Boat | Maximum Size Compass |
|----------------|----------------------|
| Under 25'      | 2¼"                  |
| 25' and over   | 3" or 4"             |
| 35' and over   | 4" or 5"             |
| 50' and over   | 5" or 6"             |
| 75' and over   | 7" or over           |

To determine the minimum size compass for a boat, divide the length of the boat by 10, and the answer will be the number of inches diameter of the minimum size compass recommended.

### CORRECTING A COMPASS COURSE

When applying variation to a true course to obtain a magnetic course, easterly deviation is applied to the left or subtracted.

When applying deviation to a compass course to obtain a magnetic course, westerly deviation is applied to the left or subtracted. When applying variation to a magnetic course to obtain a true course, westerly variation is applied to the left or subtracted.

# PILOTHOUSE LORE . . .

## KNOW YOUR SPEED

One of the first and most important things that a boat owner should do is to run his boat over an official measured course and determine his speed. Without knowing it definitely, intelligent logging on any given course is impossible. Performance estimates are often exaggerated by wishful thinking. The boat owner should know the facts as to regular cruising speed, maximum speed and speeds at various numbers of engine revolutions. The charts are generally very accurate on distances but if the owner's own idea of his speed is not definite his logging is bound to be in error that may lead to trouble sooner or later. In almost every important harbor along the coast are measured mile courses where at slack tide the new boat owner may in short order determine his speed exactly. It also pays to check every so often in case marine growth or other factors may slow the vessel down at a later date.

## DRAFT IN FRESH AND SALT WATER

The weight of salt water is 64 lbs. and of fresh water 62.43 lbs. to the cubic foot. In passing from salt to fresh water the volume of displacement therefore increases .0251. With L equalling L.W.L. in ft., B equalling beam on L.W.L. in feet, D displace in cubic feet of salt water and X displacement in long tons, A, the increase in draft in feet equals  $1.26 \text{ times } X \text{ divided by } L \text{ times } B$ . To figure increase in draft by inches,  $12 A \text{ equals } 15.1 \text{ times } X \text{ divided by } L \text{ times } B$ .

## SAILING STEERING ORDERS

**Close Hauled**—Same as "Full-and-By".

**Ease the Helm**—To reduce the amount of helm.

**Full-and-By**—As close to the wind as a vessel will lay and keep her sails full.

**Helm Down**—To bring the vessel nearer the wind.

**Helm Up**—To let the vessel go off from the wind.

**Make the Course Good**—When running before the wind and yawing, to manage the helm so that the vessel will deviate as much on one side of the course as on the other—the middle point being the course given to the helmsman.

**Meet Her**—To reverse the helm and check the swing of the vessel's head.

**No Higher**—Not to bring the vessel any closer to the wind.

**Nothing Off**—Not to allow the vessel to go any further off the wind.

**Pinch Her**—To put the helm down sufficiently to shudder the sails.

**Rap Fall**—To keep away from the wind enough to make all the sails draw well.

**Steady**—To hold the vessel as she pointed when the order was given.

**Right Rudder**—To put the rudder towards the right hand or starboard side of the vessel.

**Left Rudder**—To put the rudder towards the left hand or port side of the vessel.

## HEAVING LINES

In many cases, when a motor boat is brought correctly up to a dock, there is no need for heaving lines ashore as members of the crew can step ashore and make fast. In tidal currents, going through canals or when picking up a tow, it is quite necessary to get quick action and do it correctly. Underway the spring lines had best be stowed in the lockers, but they should be kept neatly coiled so as to be ready for instant use. Approaching a land they should be brought on deck in plenty of time so as to have everything ready. Spring lines do not need to be heavy and they will carry a long ways if heaved correctly. Half of the coil should be held in the left hand, free to run when released, and the other half held loosely in the right hand, with the heaving end and the first coils on the outside. So handled, the loops should all uncoil naturally in the air, without fouling into a knot or falling short. In picking up a tow, where a heavier line is going to be necessary, use the light spring line to heave, following with the towing line.

## RUDDER ACTION

To an old hand, the handling and feel of a boat in steering becomes instinctive. For a beginner, who has to stop and think, however, it is well to get the facts memorized, and to know without trying that left rudder under headway turns the stern of a boat to starboard and the bow to port; the right rudder turns stern to port, bow to starboard. Backing up, left rudder turns stern to port, bow to starboard, and right rudder stern to starboard, bow to port. With insufficient headway or sternway, of course, action is often erratic.

When backing down there is a tendency of a right-handed propeller to swing the stern of a motor boat to port. This is an advantage in making port-side landings but not always helpful otherwise. Power boat rudders are comparatively small, and when deprived of the propeller stream can exert little ef-

fective steering control. In some boats if it is necessary to back up any distance, it must be done by degrees, by pulling ahead as often as necessary to straighten up.

When backing down a left-handed propeller has a tendency to swing the stern of a motor boat to starboard.

## U. S. WEATHER SIGNALS

**Storm Warning** (a red flag, eight feet square with black center, three feet square) **Red Pennant.**

**White Pennant** (eight feet hoist and fifteen feet fly).

Signals should be read from the top of the staff downward. These signals indicate the other forecasts for the twenty-four hours commencing at 8 o'clock a. m.

The following explanation is made by the weather bureau of small craft, storm and hurricane warnings:

**The Small Craft Warning**—A red pennant indicates that moderately strong winds that will interfere with the safe operation of small craft are expected. No night display of small craft warnings is made.

**The Northwest Storm Warning**—A red pennant above a square red flag with black center displayed by day, or two red lanterns, one above the other, displayed by night, indicate the approach of a storm of marked violence with winds beginning from the north-east.

**The Southeast Storm Warning**—A red pennant below a square red flag with black center displayed by day, or one red lantern displayed by night, indicates the approach of a storm of marked violence with winds beginning from the southeast.

**The Southwest Storm Warning**—A white pennant below a square red flag with black center displayed by day, or a white lantern below a red lantern displayed by night, indicates the approach of a storm of marked violence with winds beginning from the southwest.

**The Northwest Storm Warning**—A white pennant above a square red flag with a black center displayed by day, or a white lantern above a red lantern displayed by night, indicates the approach of a storm of marked violence with winds beginning from the north-west.

**Hurricane, or Whole Gale Warning**—Two square flags, red with black centers one above the other, displayed by day, or two red lanterns, with a white lantern between, displayed by night, indicates the approach of a tropical hurricane, or one of the extremely severe and dangerous storms which occasionally occur.

## WIND AND SOUND

The direction of the wind is designated by the point of the compass from which it blows. All winds are caused directly or indirectly by changes in temperature. The rotation of the earth alone produces no permanent wind because the atmosphere has the same velocity of rotation as that of the portion of the earth upon which it rests, but the earth's rotation materially modifies the operation of other disturbing causes.

Sound is conveyed in a very capricious way through the atmosphere. Apart from the wind, large areas of silence have been found in different directions and different distances from the signals, in some instances even when in close proximity to the sound signal. The mariner should not assume:

1. That he is out of ordinary hearing distance because he fails to hear the sound.

2. That because he hears a fog-signal faintly, he is a great distance away from it.

3. That he is near it because he hears the sound plainly.

4. That the distance from and the intensity of the sound on any one occasion is a guide to him for any future occasion.

## DETERMINING DISTANCE BY ECHO

Cruising up a narrow passage with steep cliffs on each side, in thick weather, blow a short blast on the whistle and with a stop watch or the second hand of a regular watch note the elapsed time. Say that it took 8 seconds for the sound to leave the whistle and the echo to return. That means that half of this time, or 4 seconds, was the time it took the sound to leave the vessel and reach the cliff from which the sound rebounded and another 4 seconds for the echo to reach the ship. Using the approximation of 1,000 feet per second for the speed of sound, the distance the vessel was off the cliff was 4 times 1000 feet, or approximately  $\frac{2}{3}$  of a nautical mile.

| Deg.<br>Temp.<br>Fahr. | Feet<br>per<br>Sec. | Deg.<br>Temp.<br>Fahr. | Feet<br>per<br>Sec. |
|------------------------|---------------------|------------------------|---------------------|
| -20.....               | 1074                | 42.....                | 1105                |
| -18.....               | 1075                | 44.....                | 1106                |
| -16.....               | 1076                | 46.....                | 1107                |
| -14.....               | 1077                | 48.....                | 1108                |
| -12.....               | 1078                | 50.....                | 1109                |
| -10.....               | 1079                | 52.....                | 1110                |
| -8.....                | 1080                | 54.....                | 1111                |
| -6.....                | 1081                | 56.....                | 1112                |
| -4.....                | 1082                | 58.....                | 1113                |
| -2.....                | 1083                | 60.....                | 1114                |
| Zero.....              | 1084                | 62.....                | 1115                |
| 2.....                 | 1085                | 64.....                | 1116                |
| 4.....                 | 1086                | 66.....                | 1117                |
| 6.....                 | 1087                | 68.....                | 1118                |
| 8.....                 | 1088                | 70.....                | 1119                |
| 10.....                | 1089                | 72.....                | 1120                |
| 12.....                | 1090                | 74.....                | 1121                |
| 14.....                | 1091                | 76.....                | 1122                |
| 16.....                | 1092                | 78.....                | 1123                |
| 18.....                | 1093                | 80.....                | 1124                |
| 20.....                | 1094                | 82.....                | 1125                |
| 22.....                | 1095                | 84.....                | 1126                |
| 24.....                | 1096                | 86.....                | 1127                |
| 26.....                | 1097                | 88.....                | 1128                |
| 28.....                | 1098                | 90.....                | 1129                |
| 30.....                | 1099                | 92.....                | 1130                |
| 32.....                | 1100                | 94.....                | 1131                |
| 34.....                | 1101                | 96.....                | 1132                |
| 36.....                | 1102                | 98.....                | 1133                |
| 38.....                | 1103                | 100.....               | 1134                |
| 40.....                | 1104                | 102.....               | 1135                |



*Only BENDIX DEPTH RECORDERS give you  
all these time-tested advantages!*

### ONLY BENDIX

has 2 self-contained units, the Recorder unit which weighs as little as 40 pounds and contains *all* components—and the simple transducer located on the bottom of the vessel which sends and receives the signals. This means easier, cheaper installation, less service problems.

### ONLY BENDIX

gives you a choice of 3 transducer installations—for inside mounting in sea chests for both steel and wooden hulls, eliminating dry docking and other heavy expense to service transducer. Or the transducer may be mounted externally on the hull if desired.

### ONLY BENDIX

has plug-in connectors on all electrical units as well as the transducer for quick, inexpensive service. Splicing, soldering and other time-consuming operations eliminated.

### ONLY BENDIX

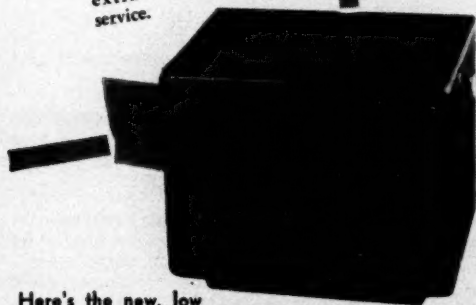
has a simplified scanning and drive mechanism. The simplicity of these systems gives extreme accuracy and extra long trouble-free service.

### ONLY BENDIX

gives you an economical trouble-free electronic unit. Because the system is highly efficient, drawing as little as 50 watts, less parts are used.

### ONLY BENDIX

has 3000 satisfied users. They have caught more fish... made more money than with any other aid since nets were developed. Ask any one of them. You'll find them in every port, coast to coast.



Here's the new, low cost, 50-fathom model DR-10 specially designed for owners of pleasure craft and small fishing vessels. Like all Bendix instruments, it draws a permanent record of bottom conditions—not just merely indicating them. And it can be owner-installed without even drilling a hole through the hull. This is the only low-cost RECORDING unit on the market. See it and other Bendix models at your dealer.

*Only Bendix*  
offers you 5 recording models  
to choose from with ranges  
from 50 feet to 400 fathoms.

*Pacific Division*

Bendix Aviation Corporation

WORTH HOLLAND, CALIF.

## Visibility Range

The distance at which objects are visible at sea on clear days varies, and is, in miles, about as stated below, at the elevations mentioned:

| Height Above<br>Sea Level<br>Feet | Distance of Visibility<br>Statute<br>Miles | Nautical<br>Miles |
|-----------------------------------|--|-------------------|
| 5 .....                           | 2.96                                       | 2.55              |
| 10 .....                          | 4.18                                       | 3.61              |
| 20 .....                          | 5.92                                       | 5.11              |
| 30 .....                          | 7.25                                       | 6.26              |
| 40 .....                          | 8.37                                       | 7.23              |
| 50 .....                          | 9.35                                       | 8.08              |
| 60 .....                          | 10.25                                      | 8.85              |
| 70 .....                          | 11.07                                      | 9.90              |
| 80 .....                          | 11.83                                      | 10.22             |
| 90 .....                          | 12.55                                      | 10.84             |
| 100 .....                         | 13.23                                      | 11.43             |
| 120 .....                         | 14.49                                      | 12.52             |
| 150 .....                         | 16.20                                      | 14.00             |

## Knots—Miles

The statute mile is 5,280 feet. The British Admiralty knot or nautical mile is 6,080 feet.

The statute knot is 6,082.66 feet and is generally considered the standard. The number of feet in a statute knot is arrived at thus: The circumference of the earth is divided into 360 degrees, each degree containing 60 knots or (360x60) 21,600 knots to the circumference, 21,600 divided into 131,385,456 (the number of feet in the earth's circumference) gives 6,082.66 feet, the length of a statute knot.

|                |               |
|----------------|---------------|
| 1 knot equals  | 1.151 miles   |
| 2 knots equal  | 2.303 miles.  |
| 3 knots equal  | 3.454 miles.  |
| 4 knots equal  | 4.606 miles.  |
| 5 knots equal  | 5.757 miles.  |
| 10 knots equal | 11.515 miles. |
| 20 knots equal | 23.030 miles. |
| 25 knots equal | 28.787 miles. |

## ANCHORING RULES

1. Take soundings in a strange harbor. Allow for tidal range.
2. Examine all parts of ground tackle before use.
3. Head into the wind or current, whichever is stronger.
4. Reverse the motor and drop anchor when the vessel has sternway, keeping a tension on the line or chain until the anchor reaches bottom.
5. Then pay out slowly until anchor catches smartly and then pay out scope to the required length and make fast on bitts.
6. Scope should always be at least seven times the depth.
7. If the bottom is rocky or obstructed, use a trip line.
8. Now take shore bearings to fix position.
9. Wind strain on an anchor is relatively small. It is the sea that does the breaking out.
10. Every boat should carry at least two anchors. A boat that cruises considerably can well afford four anchors.
11. Best holding bottoms are mixtures of clay and mud. A weedy bottom won't hold. A sand bottom gives poor holding with a traditionally shaped anchor.
12. If using rope, serve with canvas to prevent chafe. Always dry thoroughly before stowing.

## HOW TO FIGURE BOAT PAINTS

To figure your paint and varnish requirements:

**For bottoms**—Multiply the length of the boat on the waterline, by the draft and then by 3.5; divide the total by 400.

**For topsides**—Multiply the length of the boat over all, by the freeboard at the highest point above the waterline and then by 1.5; divide this total by 400 for bare wood and 450 for subsequent coats.

**For decks**—Multiply the length of the boat by the beam and then by .75; divide this total by 400 for bare wood and by 450 for subsequent coats.

**For cabins**—Multiply the length of the surface to be covered by the width and divide the total by 400 for bare wood and by 450 for subsequent coats.

**For spars**—Multiply the greatest diameter by 2.5 and then by the height in feet, figuring your total in square feet. Divide the total by 400 for bare wood and by 450 for subsequent coats.

**Paint and varnish remover**—One gallon of marine paint & varnish remover should soften from 200 to 250 square feet, depending upon the condition of the surface and the number of coats to be removed.

These figures above give the approximate number of gallons of paint or varnish required per coat to finish various parts of a boat. Always bear in mind that bare wood requires more paint than a painted surface.





## More Yachting Pleasure

► Merely setting the desired course and permitting the Sperry Magnetic Compass Pilot to take over in open waters provides a method of steering that gives new meaning to a *pleasure cruise*. For it is a special pleasure to cruise hour on hour in all waters with the desired headings held automatically.

► The longer the cruise lasts, the better everyone aboard appreciates what *automatic steering* means in

easing the strain of manual steering . . . lightening work . . . adding to fun and relaxation time. And with the portable Remote Controller full rudder control is available from any part of the boat.

► The Magnetic Compass Pilot brings to small boats

the advantages that the Sperry automatic Gyro-Pilot brings to larger craft. Like all Sperry products, it is backed by Sperry's worldwide service organization. Our nearest district office will be happy to give you additional information.

**SPERRY** *GYROSCOPE COMPANY*

**DIVISION OF THE SPERRY CORPORATION, GREAT NECK, N. Y. • CLEVELAND • NEW ORLEANS • NEW YORK • LOS ANGELES • SAN FRANCISCO • SEATTLE**

**Distributor in Florida for the Magnetic Compass Pilot—Merrill-Stevens Drydock Co., Miami**

# When and Where To Fly Flags

## POWER BOATS

| Flag                     | When Flown  | Motor Boat with Bow and Stern Staffs Only | Motor Boat with Bow and Stern Staffs and Signal Mast | Motor Boat With 2 Masts  |
|--------------------------|---|---|--|--|
| Yacht Ensign.....        | 8 a.m. to sundown   | Aft.                                      | Aft.   | Aft.   |
| Club Pennant.....        | 8 a.m. to sundown   | Bow at anchor                             | Bow.   | Foremast.  |
| Private Signal.....      | 8 a.m. to sundown   | Bow underway                              | Masthead.  | Mainmast.  |
| Flag Officer's Flag..    | Day and night when in commission.                             | In place of Club Flag or private signal.  | In place of Private Signal or Night Pennant.         | In place of Private Signal.  |
| Jack.....                | At anchor on Sundays and holidays and 8 a.m. to sundown.      |   |  | Jack staff.  |
| Absent Flag.....         | During daylight during absence of owner from boat.            |   | Starboard yardarm.                                   | Starboard main yardarm.  |
| Guest Flag.....          | During daylight when owner is absent but guests are on board. |   | Starboard yardarm.                                   | Starboard main yardarm.  |
| Owner's Meal Flag..      | During daylight during meal hours of owner, when at anchor.   |   | Starboard yardarm.                                   | Starboard main yardarm.  |
| Crew's Meal Pennant..... | During daylight during meal hours of crew when at anchor.     |   |  | Port fore yardarm.   |
| Night Pennant.....       | From sundown to 8 a.m.  |   | Masthead except when on flag officer's boats.        | Main masthead except on flag officer's boats when night pennant is flown at foremast head. |
| Church Flag.....         | During divine service on board.                               | Over ensign.                              | Over ensign.   | Over ensign.   |

| Flag                  | When Flown  | Staff With Yardarm | Staff With Gaff | Staff With Gaff and Yardarm or Spreader |
|-----------------------|---|--------------------|-----------------|---|
| American Ensign*..... | 8 a.m. to sundown   | Starboard yardarm. | Gaff.           | Gaff.                                   |
| Club Pennant.....     | 8 a.m. to sundown   | Masthead.          | Masthead.       | Masthead.                               |
| Officers Flag.....    | 8 a.m. to sundown during presence of flag officer on grounds or at anchorage. | Port (1) yardarm.  |                 | Port yardarm.                           |
| Jack.....             | 8 a.m. to sundown Sundays and holidays only.                                  | Port yardarm.      |                 | Starboard yardarm.                      |

(1)—Except on Sundays and Holidays.

\*Note—The American National ensign and not the yacht ensign should be flown.

## SELECT FUELS and LUBRICANTS TO FIT YOUR NEEDS

***Union Oil's full line of marine products  
is designed for specific jobs***

**76 WHITE GASOLINE** assures you economical operation, quick starting and full power. It's a clear, *unleaded* gasoline, designed especially for small craft.

**7600 GRADE 80 GASOLINE** is Union Oil's finest. If you own a high-compression engine, try 7600 Grade 80 for smooth, dependable performance and maximum power.

**DIESEL** meets the most rigid requirements of your Diesel equipment. It's a pure, wholly-distilled Diesel fuel, carefully controlled from refinery to dock.

**TRITON OIL** fully protects your gasoline-powered craft. Special compounds

have been added to the rich, pure 100% paraffin-base stock to retard acidity, sludging and corrosion.

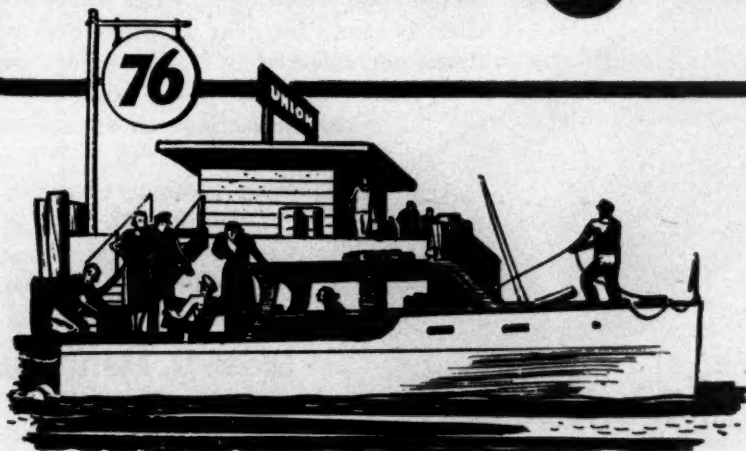
**TSX, THE FAMOUS PURPLE OIL**, is the answer to your *severe* lubrication problems. Compounded with an outstanding combination of additives, TSX is *ideal* for Diesel engines.

• • •

You can rely on these Union Oil marine products...and on the men who serve you at any one of the convenient Union Oil marine docks from Alaska to Panama.\* Next time, tie up at the sign of the 76.

*\*Union Oil marine products also available in most principal harbors along the West Coast of Central and South America and in the Far East.*

**UNION OIL COMPANY 76 OF CALIFORNIA**

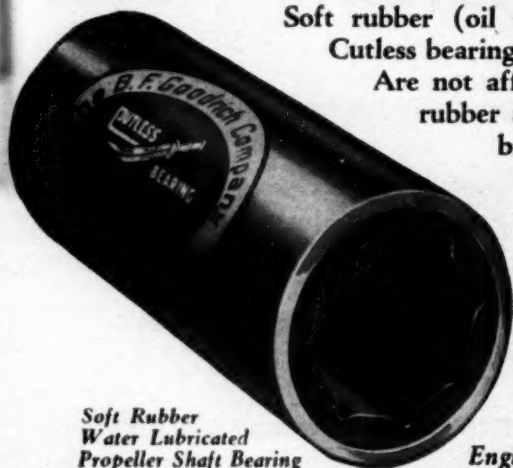


# When and Where To Fly Flags

## SAIL AND AUXILIARY BOATS

| Flag                  | When Flown         | Sloops and Cutters   | Yawls & Ketches   | Schooner of Two or More Masts   |
|-----------------------|--------------------|--|---|---|
| Yacht Ensign          | 8 A. M. to Sundown | At Anchor:—Stern Staff<br>Under Power:—Stern Staff<br>Under Sail:—Main Peak                    | —Stern Staff<br>—Stern Staff<br>—Mizzen Peak                                | —Stern Staff<br>—Stern Staff<br>—After Peak   |
| Club Pennant          | 8 A. M. to Sundown | At Anchor:—Masthead  | Main Masthead   | AT ANCHOR<br>Fore Masthead  |
| Private Signal        | 8 A. M. to Sundown | Underway:—Masthead   | Mizzen Masthead   | Main Masthead   |
| Flag Officers' Flag   | Day & Night        | In Place of Private Signal   | In Place of Private Signal  | In Place of Private Signal  |
| Foreign National Flag | 8 A. M. to Sundown | At Anchor:—Forestay<br>Underway:—Forestay or Forward Starboard Shroud<br>One-Third Mast Height | —Forestay<br>—Forestay or Forward Starboard Shroud<br>One-Third Mast Height | AT ANCHOR:—Bow Staff or Forestay<br>UNDERWAY:—Fore Masthead or Forward Starboard Shroud |

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# NAVIGATION WRINKLES

## CROSS BEARINGS

The most popular method of plotting the position of a ship is by cross bearings of two known objects. To fix the ship's position by this method, take the compass bearing of two known objects whose positions are accurately shown on the chart and whose bearings taken from the ship differ as nearly as possible by 90 degrees.

Take these bearings by sight vanes or a pelorus over compass or by a pelorus on the wing of the bridge or in the pilot house. Take them in rapid succession and note the time they were taken. The bearings should be taken when the ship is right on her course.

Correct these observed bearings for the compass error (that is for variation and deviation). Your bearings are then true and taken off the true compass rose on the chart and plotted. Where these two lines intersect is the position of the ship at the time of taking the bearings.

It will not always be possible to select two objects whose bearings differ about 90 degrees. Any other differences may be used but be sure that the angle between the bearings is not very sharp or obtuse.

## THE FOUR POINT BEARING METHOD

When proceeding on a straight course passing different known objects, the most commonly used method of finding the distance the object was passed abeam is the four point method. A bearing of the object is taken when it is four points (or 45 degrees) off the bow and the time is noted and if a vessel has a patent log, the log is read. When the object bears abeam, the time is again noted and if there is one, the log is read. The time elapsed between the bearings give the amount of distance run between the bearings. This will be the distance the object was passed when abeam. This distance may be found if a vessel is equipped with a log by the difference between the two log readings which will

be the distance the object was passed when abeam, providing your log is accurate.

## THE SEVEN TENTHS RULE

The Seven Tenths Rule is to take 7/10 of the distance run between the bearing of an object when two points off the bow and the second bearing when it bears four points off the bow sevenths of the distance run between the two bearings will give the distance the object will be passed when abeam.

## 26½° TO 45° OFF BOW BEARINGS

The distance run between an object bearing 26½ degrees off the bow and when it bears 45 degrees off the bow, is the distance the object will be passed when abeam.

## FROM ABEAM TO ON YOUR QUARTER

Suppose you were piloting along the coast and you sighted a light, through the rain or other thick weather, when it was abeam. Note the time and the log reading, and if possible, take a sight of the light when it bears four points abaft the beam. The distance run between the two bearings will be the distance the light was passed when abeam. This is the same as a four point bearing taken off the bow, only the abeam bearing is taken first.

## LAYING A COURSE FOR STEERING

To determine a course from one point to another, place the edge of a parallel ruler on the two points, then walk the parallel ruler to the nearest compass rose until the edge of the ruler is directly over the center point of the compass rose. The course may then be read on the outer edge of the compass rose where the edge of the ruler rests and in the direction desired.

The outer compass rose gives true courses and the inner compass rose gives magnetic courses.

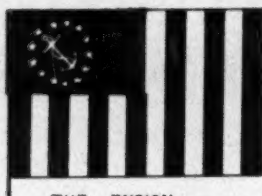
## LOCATION ABOARD SHIP

Looking toward the bow or head of a vessel the left-hand side is port; right-hand side is starboard.

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COMMANDER



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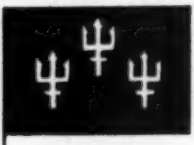
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LIEUTENANT

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The objects of the United States Power Squadrons are to establish a high standard of skill in the handling and navigation of yachts, to encourage the study of the science of navigation, to cooperate with the agencies of the United States Government charged with the enforcement of the laws and regulations relating to navigation and to stimulate interest in activities which will tend to the upbuilding of our Navy, Coast Guard and Merchant Marine.

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27—Newport  
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| 33—Stockton      | Dr. C. J. Looser    | Dr. P. K. Coddington | G. A. Lee        |
| 34—Bethel Island | W. H. Crossman, Jr. | M. B. Veale          | H. F. Radbruch   |
| 41—Fort Bragg    | Jack Kostick        | Erwin Baker          | Harry Urban      |
| 51—Vallejo       | B. H. Lewis         | Antone Smith, Jr.    | S. M. Epps       |
| 52—Napa          | C. E. Rode          | L. G. Gramley        | Anthony Leonard  |
| 54—Pt. San Pablo | Harry Barusch       | J. A. Ryan           | V. P. Nielson    |
| 61—Lake Tahoe    | F. T. Webber        | Fred Main            | G. T. Beagle     |

## THIRTEENTH COAST GUARD DISTRICT

### NEW WORLD LIFE BLDG.

#### SEATTLE 4, WASH.

Commander..... Rear Admiral R. T. McElligott, USCG  
 Director of Auxiliary..... Lieut. Morest L. Skaret

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 Vice-Commodore, Washington Area..... Lester O. Trabert, 935 E. Northlake, Seattle  
 Vice-Commodore, Oregon Area..... L. D. Winters, Equitable Bldg., Portland  
 Training Officer..... R. D. Harting, 3425 37th Ave. S., Seattle  
 Operations Officer..... Kenneth N. Jackson, 2626 Boylston Ave. N., Seattle  
 Assistant Training Officer..... Elwyn G. Craven, 2006 N.E. 24th Ave., Portland  
 Assistant Operations Officer..... Charles Lundberg, 3332 N.E. 31st, Portland  
 Communications Officer (Acting)..... Capt. G. W. Callbeck, 1208 New World Life Bldg., Seattle  
 Assistant Communications Officer..... William C. Miller, 6947 N.E. Alameda, Portland  
 Aviation Officer..... Charles S. Chester, 905 2nd Ave., Seattle

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 Vice-Captain..... Henry Locke  
 Training Officer..... L. W. Kemmish

#### Division III

Captain..... Dr. Melvin Bondelid  
 Vice-Captain..... James L. Allerdice  
 Training Officer..... Dr. James A. Montgomery

#### Division IV

Captain..... Peter A. Formuzis  
 Vice-Captain..... Bernard D. Elliott  
 Training Officer..... Carl J. Arney

#### Division V

Captain..... Bruce Temple  
 Vice-Captain..... Ivan H. Campbell  
 Training Officer..... Culver L. Coffman

#### Division VII

Captain..... Frank L. Nau  
 Vice-Captain..... Wm. C. Miller  
 Training Officer..... Elwyn G. Craven

#### Division VIII

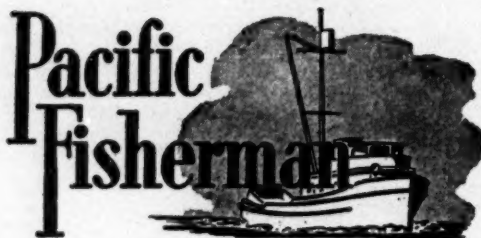
Captain..... Paul Lemargle  
 Vice-Captain..... Glenn L. Adams  
 Training Officer..... H. E. Elford

### FLOTILLA OFFICERS

| Flotilla         | Commander            | Vice-Commander      | Training Officer    |
|------------------|----------------------|---------------------|---------------------|
| 11—Bellingham    | L. R. Anderson       | August Auguston     | Howard Brown        |
| 21—Seattle       | Chet Gibson          | Fred Weldon         | Stuart T. Viggers   |
| 22—Everett       | Gordon B. Irvine     | William T. Griffin  | Ernest J. Secor     |
| 23—Seattle       | Frederick T. Yates   | Donald I. Tittmore  | Raymond W. Meyers   |
| 24—Seattle       | Dr. George Knowles   | James Ballard       | Allen P. Green, Jr. |
| 25—Bremerton     | Lewis E. Morris      | George C. Mason     | Howard L. Haven     |
| 28—Seattle       | Bruce Daly           | S. R. Price         | S. N. Stevenson     |
| 29—Seattle       | John R. Wills        | James Taggart       | Edward Hiney        |
| 32—Port Townsend | Loren Mosley         | Lester Meyers       | James L. Allerdice  |
| 34—Port Angeles  | Dr. Gail C. White    | E. A. Carlson       | Harold Hibbs        |
| 41—Tacoma        | Peter A. Formuzis    | Russell H. Michaels | Jack Evans          |
| 49—Olympia       | Frank L. Whitmarsh   | Ernest Mallory      | Elmer Tillman       |
| 51—Seattle       | Harry J. Wilson      | Walter T. Coy       | Joseph B. Mesdag    |
| 52—Seattle       | Duane Peabody        | Jalmer Halls        | Chester M. Green    |
| 53—Vashon        | Robert E. Graham     | Cecil E. Perkins    | Frank B. Von Culin  |
| 54—Seattle       | H. William Blake     | Robert B. Munro     | Melvin Larsen       |
| 74—Portland      | Kenneth E. Rodgers   | Edward J. Green     | William F. Herald   |
| 75—Portland      | Jerry Wildman        | Fred Vinton         | Charles D. Bennett  |
| 76—Astoria       | Dr. Walter L. Hay    | Fred Fluhrer        | Cameron Butte       |
| 77—Portland      | Marcus Gerlack       | Harry Arnold        | Clifford G. Andruss |
| 78—Depoe Bay     | Fred E. Corn         | T. A. Hudson        | Stanley R. Allyn    |
| 82—Coulee Dam    | Robert D. Waterhouse | Robert D. Stevens   | Hal A. Marchant     |
| 84—Coeur d'Alene | Louis N. Moss        | Dr. George E. Hurd  | Howard E. Elford    |

# **You Can Reach the Big Buying Power of Your Best Market**

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VESSEL OWNER GROUPS  
LARGER FISHING VESSELS  
CANNERIES and PLANTS**

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Each season brings many new men into positions of prominence in the operating end of the business (over 800 fish packing and processing plants) . . . and many new boat owners join the fishing fleet (well over 22,000 vessels).

You will want to tell your story to these new men. You will want to furnish old customers with new data about your products and services.

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# **PACIFIC FISHERMAN**

**71 COLUMBIA STREET**

**SEATTLE 4, WASHINGTON**



## PACIFIC COAST TUG BOAT STACKS

|  |  |   |  |   |   |
|--|--|---|--|---|---|
|    | American Tug Boat Co.<br>Everett, Wash.        |    | Knappston Towboat Co.<br>Astoria, Ore.                       |    | Rio Vista Lightship<br>California                     |
|    | Canadian National Railway<br>British Columbia  |    | Langview Tug Boat Co.<br>Rainier, Oregon                     |    | San Francisco Towing Co.<br>California                |
|    | Case Construction Co.<br>California            |    | Marpole Towing Co., Ltd.<br>Vancouver, B. C.                 |    | Shaver Transportation Co.<br>Oregon                   |
|    | Catalina Isle S. S. Line<br>California         |    | Monarch Towing & Trading<br>British Columbia                 |    | Wilbur J. Smith<br>Oregon                             |
|    | M. R. Cliff Tugboat Co.<br>British Columbia    |    | Nanaimo Towing Co., Ltd.<br>Nanaimo, B. C.                   |    | Strait Towing & Salvage Co., Ltd.<br>Vancouver, B. C. |
|    | Coastal Towing Co., Ltd.<br>Vancouver, B. C.   |    | Olson Tug Boat Co.<br>Tacoma, Wash.                          |    | Star & Crescent Boat Co.<br>California                |
|    | Crowley Launch & Tugboat Co.<br>California     |    | Olympic Tug & Barge Co.<br>Ketchikan, Alaska                 |    | E. D. Stone<br>British Columbia                       |
|   | Fox Launch & Tug Co.<br>Washington             |   | Pacific Coyle Navigation Co.<br>British Columbia             |   | Ultican Tug Boat Co.<br>Washington                    |
|  | Gulf of Georgia Towing Co.<br>British Columbia |  | Pacific Tug Boat Co.<br>Washington                           |  | Vancouver Barge Transportation<br>British Columbia    |
|  | Harbor Towing Company<br>British Columbia      |  | Pacific Tugboat & Salvage Co.<br>California                  |  | Vancouver Tug Boat Co.<br>British Columbia            |
|  | Harbor Tug & Barge Co.<br>California           |  | Preston-Mann Towing Co., Ltd.<br>Vancouver, B. C.            |  | Victoria Tug Co., Ltd.<br>British Columbia            |
|  | Island Tug & Barge Co.<br>British Columbia     |  | Puget Sound Tug & Barge Co.<br>Seattle, Wash.                |  | Washington Tug & Barge Co.<br>Washington              |
|  | Kingcome Navigation Co.<br>British Columbia    |  | Red Stack Towboat Co.<br>San Pedro Towboat Co.<br>California |  | Young & Gore Tug Boat Co.<br>British Columbia         |

## BUOYAGE OF THE UNITED STATES

### COLOR, SHAPE AND LIGHT CHARACTERISTICS IN RELATION TO LOCATION AND USE

Note: Where the terms PORT & STARBOARD are used they are as seen by a vessel proceeding from seaward. For complete details see introduction, LIGHT LIST.

#### I. LIGHTED BUOYS:





These buoys have no shape characteristic.

Painting, colors and numbering; same as unlighted buoys. (see 11 below)

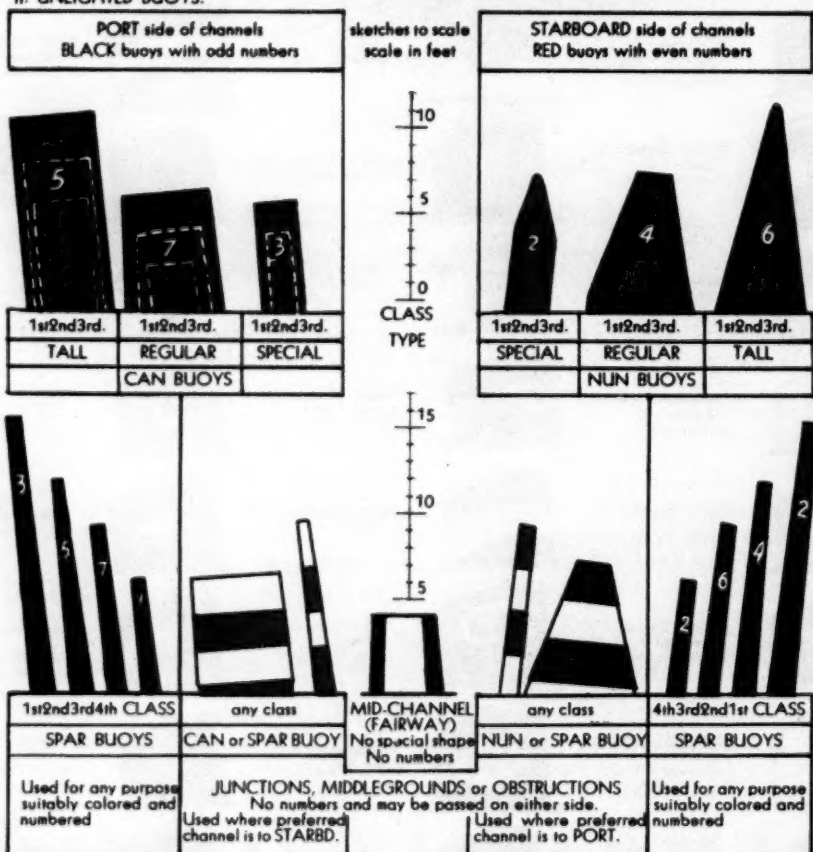
#### LIGHT COLORS:

- (a) RED lights are used only on STARBOARD side of channels.
- (b) GREEN lights are used only on PORT side of channels.
- (c) WHITE lights may be used on either side of channels and are always used on MID-CHANNEL (vertical striped) buoys.
- (d) WHITE, RED or GREEN lights may be used on buoys marking JUNCTIONS, MIDDLEGROUNDS or OBSTRUCTIONS which may be passed on either side, as follows:  
 WHITE, unless desired to show a preferred channel.  
 RED if preferred channel is to PORT.  
 GREEN if preferred channel is to STARBOARD.

#### LIGHT PERIODS:

- (a) On SOLID COLOR BUOYS (marking the sides of channels) flashes or occultations occur at regular intervals, thus: 
- (b) On HORIZONTAL BANDED BUOYS (marking JUNCTIONS, MIDDLEGROUNDS or OBSTRUCTIONS which may be passed on either side) only the interrupted quick flash is used, thus: 
- (c) On buoys where it is desired to show the need of particular caution at an important turn, etc., the quick flash (not less than 60 fl. per min.) is used, thus: 
- (d) On VERTICAL STRIPED BUOYS (marking mid-channel or fairway) WHITE lights showing groups of short-long flashes are used, thus: 

#### II. UNLIGHTED BUOYS:



#### III. SPECIAL PURPOSE BUOYS:

- (a) QUARANTINE buoys—YELLOW
  - (b) ANCHORAGE buoys—WHITE
  - (c) DREDGING buoys—WHITE, GREEN TOP
  - (d) BELL & GONG buoys have flat top with skeleton framework. WHISTLE buoys are usually conical.
- } No special shape or numbers

Note: Lateral buoys conform to statutory provisions and recommendations of Intl. Marine Conference, 1889, Wash., D. C.

# OFFICIAL FLAGS OF PACIFIC COAST YACHT CLUBS

|  |   |  |   |  |   |
|--|---|--|---|--|---|
|  | <b>Aeolian Yacht Club</b><br>Alameda, Calif.                |  | <b>California Yacht Club</b><br>Wilmington, Calif.            |  | <b>Elkhorn Yacht Club</b><br>Monterey Bay, Calif.       |
|  | <b>Alamitos Bay Yacht Club</b><br>Long Beach, Calif.        |  | <b>Capital City Yacht Club</b><br>Victoria, B. C.             |  | <b>Encinal Yacht Club</b><br>Alameda, Calif.            |
|  | <b>Anacortes Yacht Club</b><br>Anacortes, Wash.             |  | <b>Catalina Island Yacht Club</b><br>Avalon, Calif.           |  | <b>Eugene Yacht Club</b><br>Eugene, Ore.                |
|  | <b>Antioch Yacht Club</b><br>Antioch, Calif.                |  | <b>Century Yacht Club</b><br>Beverly Hills, Calif.            |  | <b>Everett Yacht Club</b><br>Everett, Wash.             |
|  | <b>April Point Yacht Club</b><br>Quarhiaski Cove, B. C.     |  | <b>Clear Lake Yacht Club</b><br>Nice, Calif.                  |  | <b>Fort Sutter Yacht Club</b><br>Sacramento, Calif.     |
|  | <b>Archipelago Yacht Club</b><br>Lopez Island, Wash.        |  | <b>Columbia River Yachting Assn.</b><br>Portland, Ore.        |  | <b>Golden Gate Yacht Club</b><br>San Francisco, Calif.  |
|  | <b>Astoria Yacht Club</b><br>Astoria, Ore.                  |  | <b>Coos Bay Yacht Club</b><br>Marshfield and North Bend, Ore. |  | <b>Grand Coulee Dam Yacht Club</b><br>Coulee Dam, Wash. |
|  | <b>Balboa Yacht Club</b><br>Balboa Island, Calif.           |  | <b>Corinthian Yacht Club</b><br>Belvedere, Calif.             |  | <b>Hollywood Yacht Club</b><br>Los Angeles, Calif.      |
|  | <b>Bellingham Boat Owners Assn.</b><br>Bellingham, Wash.    |  | <b>Corinthian Yacht Club</b><br>Seattle, Wash.                |  | <b>Honolulu Yacht Club</b><br>Honolulu, T. H.           |
|  | <b>Bellingham Yacht Club</b><br>Bellingham, Wash.           |  | <b>Coronado Yacht Club</b><br>Coronado, Calif.                |  | <b>Humboldt Yacht Club</b><br>Eureka, Calif.            |
|  | <b>Berkeley Yacht Club</b><br>Berkeley, Calif.              |  | <b>Cossair Yacht Club</b><br>Long Beach, Calif.               |  | <b>Inverness Yacht Club</b><br>Tombes Bay, Calif.       |
|  | <b>Big Bear Yacht Club</b><br>Big Bear Lake, Calif.         |  | <b>Cowichan Bay Yacht Club</b><br>Cowichan Bay, B. C.         |  | <b>Ionic Sailing Club</b><br>Stockton, Calif.           |
|  | <b>Blue Water Cruising Club</b><br>Manhattan Beach, Calif.  |  | <b>Coyote Point Yacht Club</b><br>San Mateo, Calif.           |  | <b>Jonathan Yacht Club</b><br>Los Angeles, Calif.       |
|  | <b>Bonneville Yacht Club</b><br>Bonneville, Ore.            |  | <b>Cruising Club of Hawaii</b><br>Honolulu, T. H.             |  | <b>Juneau Yacht Club</b><br>Juneau, Alaska              |
|  | <b>Bremerton Yacht Club</b><br>Bremerton, Wash.             |  | <b>The Dalles Yacht Club</b><br>The Dalles, Ore.              |  | <b>Kaneohe Yacht Club</b><br>Honolulu, Hawaii           |
|  | <b>Burnard Yacht Club</b><br>Vancouver, B. C.               |  | <b>Day Island Yacht Club</b><br>Tacoma, Wash.                 |  | <b>Karlo Boat Club</b><br>Karlo, B. C.                  |
|  | <b>Cabrillo Beach Yacht Club</b><br>San Pedro, Calif.       |  | <b>Delta Yacht Club</b><br>Stockton, Calif.                   |  | <b>Kauai Yacht Club</b><br>Lihui, Kauai, T. H.          |
|  | <b>California Speed Boat Association</b><br>Oakland, Calif. |  | <b>Devil's Lake Yacht Club</b><br>Delake, Ore.                |  | <b>Kelowna Yacht Club</b><br>Kelowna, B. C.             |

# OFFICIAL FLAGS OF PACIFIC COAST YACHT CLUBS



**Ketchikan Yacht Club**  
Ketchikan, Alaska



**Kihlano Yacht Club**  
Vancouver, B. C.



**Kootenay Launch Club**  
Nelson, B. C.



**Lake Arrowhead Yacht Club**  
Lake Arrowhead, Calif.



**Lake Chelan Yacht Club**  
Chelan, Wash.



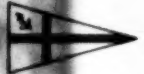
**Lake Merritt Sailing Club**  
Oakland, Calif.



**La Jolla Corinthian Yacht Club**  
La Jolla, Calif.



**La Playa Yacht Club**  
La Playa, San Diego



**Lido Isle Yacht Club**  
Newport Beach, Cal.



**Long Beach Outboard Club**  
Long Beach, Calif.



**Long Beach Yacht Club**  
Long Beach, Calif.



**Longview Yacht Club**  
Longview, Wash.



**Los Angeles Yacht Club**  
Terminal Island, Calif.



**Malibu Yacht Club**  
Malibu, Calif.



**Maple Bay Yacht Club**  
Maple Bay, B. C.



**Marin Yacht Club**  
San Rafael, Calif.



**Marina Yacht Club**  
Alameda, Calif.



**Martinez Yacht Club**  
Martinez, Calif.



**Merced Yacht Club**  
Merced, Calif.



**Mission Bay Yacht Club**  
San Diego, Calif.



**Nanaimo Yacht Club**  
Nanaimo, B. C.



**Newport Harbor Yacht Club**  
Balboa Island, Calif.



**Northern California Power Cruiser Association**  
San Francisco, Calif.



**Northshore Yacht Club**  
Sausalito, Calif.



**Oakland Yacht Club**  
Oakland, Calif.



**Olympia Yacht Club**  
Olympia, Wash.



**Pacific Coast Yachting Association**



**Pacific Inter-Club Yacht Assn.**  
San Francisco, Calif.



**Palo Alto Yacht Club**  
Palo Alto, Calif.



**Pearl Harbor Yacht Club**  
Honolulu, T. H.



**Point San Pablo Yacht Club**  
Richmond, Calif.



**Port Angeles Yacht Club**  
Port Angeles, Wash.



**Portland Yacht Club**  
Portland, Ore.



**Port Townsend Yacht Club**  
Port Townsend, Wash.



**Prince Rupert Yacht Club**  
Prince Rupert, B. C.



**Queen City Yacht Club**  
Seattle, Wash.



**Rainier Yacht Club**  
Seattle, Wash.



**Richmond Yacht Club**  
Richmond, Calif.



**Riverside Yacht Club**  
Canby, Ore.



**Rose City Yacht Club**  
Portland, Ore.



**Royal Canadian Navy Yacht Club**  
Victoria, B. C.



**Royal Vancouver Yacht Club**  
Vancouver, B. C.



**Royal Victoria Yacht Club**  
Victoria, B. C.



**Sacramento Yacht Club**  
Sacramento, Calif.



**St. Francis Yacht Club**  
San Francisco, Calif.



**San Diego Speedboat Club**  
San Diego, Calif.



**San Diego Yacht Club**  
San Diego, Calif.



**San Francisco Yacht Club**  
Belvedere, Calif.



**San Luis Rey Yacht Club**  
San Diego, Calif.



**San Luis Yacht Club**  
San Luis Obispo, Cal.



**San Rafael Yacht Club**  
San Rafael, Calif.



**Santa Barbara Yacht Club**  
Santa Barbara, Calif.



**Santa Cruz Yacht Club**  
Santa Cruz, Calif.



**Santa Monica Yacht Club**  
Santa Monica, Calif.



# OFFICIAL FLAGS OF PACIFIC COAST YACHT CLUBS



**Sausalito Cruising Club**  
Sausalito, Calif.



**Seattle Yacht Club**  
Seattle, Wash.



**Sequoia Yacht Club, Inc.**  
Redwood City, Calif.



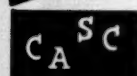
**Shasta Yacht Club**  
Redding, Calif.



**South Bay Yacht Club**  
Alviso, Calif.



**South Coast Corinthian Yacht Club**  
Santa Monica, Calif.



**Southern California Cruiser Association**  
Los Angeles, Calif.



**Southern California Yachting Ass.**  
Los Angeles, Calif.



**Southwestern Yacht Club**  
San Diego, Calif.



**Spokane Sailing Club**  
Spokane, Wash.



**Stockton Yacht Club**  
Stockton, Calif.



**Swinomish Yacht Club**  
La Connor, Wash.



**Tacoma Yacht Club**  
Tacoma, Wash.



**Tahoe Yacht Club**  
Lake Tahoe, Calif.



**Transpacific Yacht Club**  
Los Angeles, Calif.



**Tyee Yacht Club**  
Seattle, Wash.



**Vallejo Yacht Club**  
Vallejo, Calif.



**Ventura County Boat Club**  
Ventura, Calif.



**Voyager's Yacht Club**  
Newport Beach, Calif.



**Waikiki Yacht Club**  
Honolulu, T. H.



**West Basin Yacht Club**  
Wilmington, Calif.



**West Coast Yacht Club**  
Los Angeles, Calif.



**West Vancouver Yacht Club**  
West Vancouver, B. C.

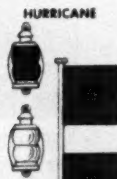


**Yaquina Bay Yacht Club**  
Newport, Ore.

## U. S. STORM SIGNALS



These signals are displayed when necessary at principal harbors, yacht clubs and Coast Guard stations and vessels



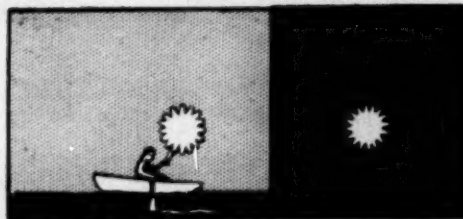
## CANADIAN STORM SIGNALS



Wind directions shown at start of storm.

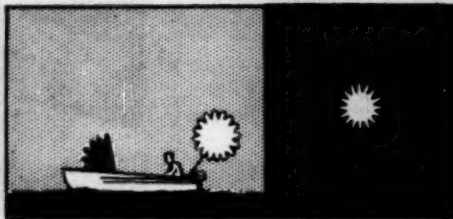


## ROW BOATS



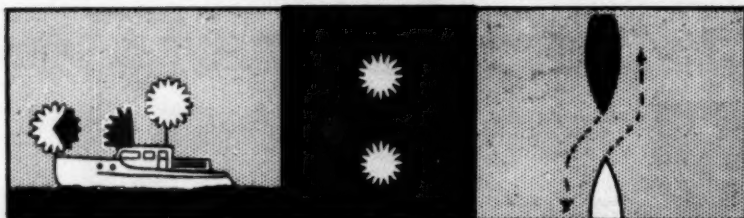
Rowing boats and all unpowered craft without sails should carry a portable white light to be shown whenever there is risk of collision.

## MOTOR BOATS CLASS A and 1



Motor boats of Class A (0-16 feet) and of Class 1 (16-26 feet) carry a combination green and red light forward, plus a white light aft.

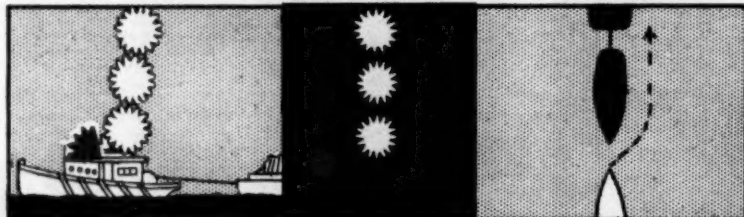
## MOTOR BOATS: Classes II and III



Motor boats of Class II (26-40 feet) and Class III (40-65 feet) carry a white light forward showing from right ahead to 2 points abaft the beam and visible at least 2 miles; a red light on the port side and

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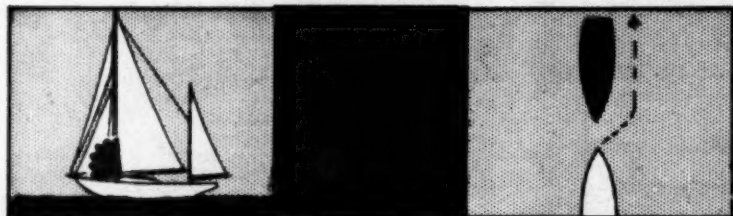
## TOWING VESSELS with TOWS



Yachtsmen should approach towing vessels with caution and study their lights. The thing or vessel towed carries white lights aft. The tow vessel itself carries, in addition to her sidelights, two bright lights

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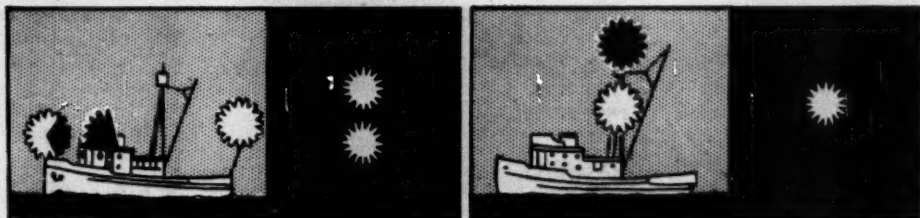
## SAILING CRAFT



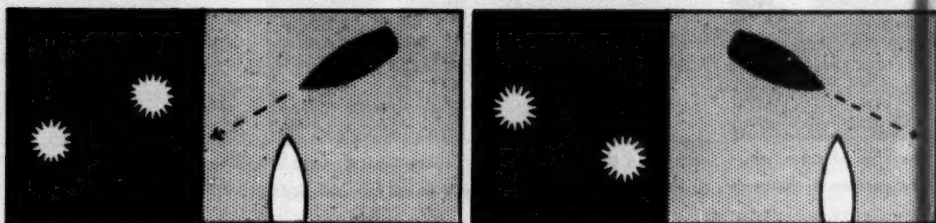
Sailing craft do not carry bow lights. They are required to carry 10 pt. red light to port, and 10 pt. green light to starboard, as

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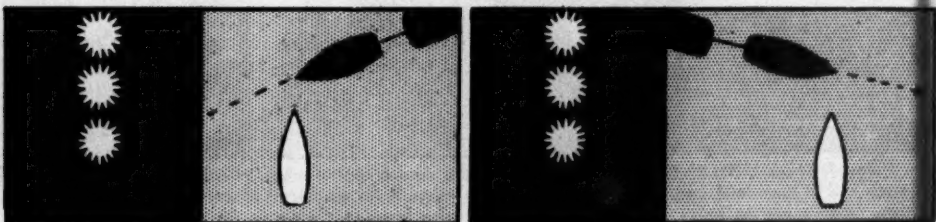
# FISHING VESSELS



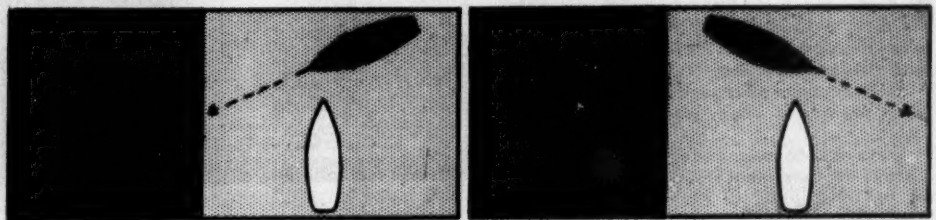
Fishing vessels carry peculiar combinations of lights, depending on whether or not they are engaged in fishing. A fishing vessel under way shows the usual lights of her class. When engaged in commercial fishing she carries the additional lights shown above. The white light, when fishing, may be carried not more than 10 feet horizontally away from the red light in the direction of the net.



a green light on the starboard, screened to show from right ahead to 2 points abaft the beam and visible at least 1 mile; a white light aft showing all around the horizon and visible at least 2 miles.

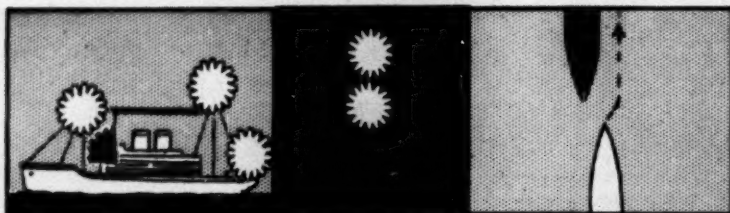


vertically, not less than 6 feet apart. When towing astern, three lights are used. Navy minesweepers at night carry two red and one white lights, arranged vertically under a topmast white light, to indicate a submerged tow.



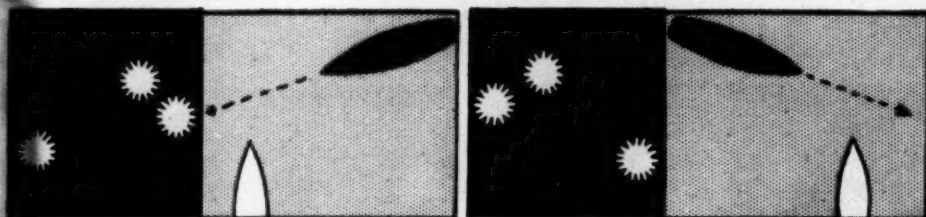
sidelights. When being overtaken by another vessel they must show a white light or flare aft. A motor-sailer carries no bow lights and no range lights.

## STEAMSHIPS (Ocean)



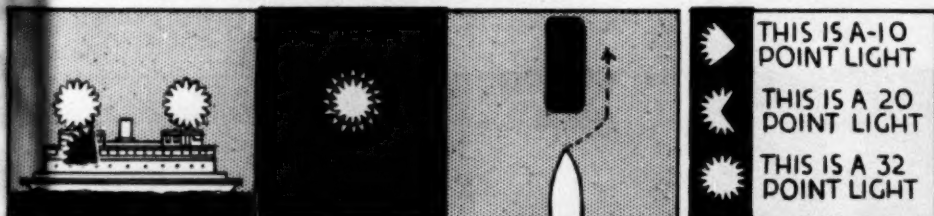
A steam vessel (which includes any vessel propelled by machinery) is required to show lights as indicated in the diagram above. As in

CONTINUED BELOW



the case of other vessels shown on this in this section, some typical night situations are shown, illustrating the position of the vessels and the lights seen from the pilot house of your own boat.

## DOUBLE-ENDER FERRIES



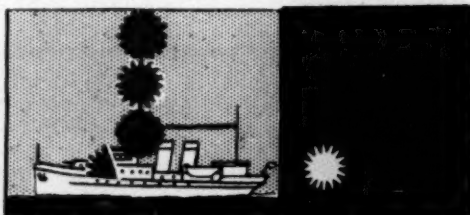
Double-ender ferries carry red and green side lights, and a central range of two white lights, one at each end of the vessel and at the same height—the range lights visible all around the horizon. Other ferry boats carry the lights of ordinary steamers. In some localities "company lights" are shown higher than the range lights.

## NAVY PORT EXAMINATION, GATE VESSELS

Port examination vessels have the following daylight and night-time designations: during the day, a Union Jack flown from the truck when the port is open; three vertical red balls when the port is closed.

At night, three all around horizon white lights when the port is open; when closed, three red lights.

Gate vessels, or guardships, also have distinctive day and night signals for traffic control. A full description of signals applying to a particular harbor entrance or restricted area should be secured by reference to "Notices to Mariners" or local Captain of the Port.



A Navy port examination vessel shows three red lights arranged vertically six feet apart to indicate that the port is closed—three white lights when the port is open.



# Marine Radio Telephone



## RULES ~ OPERATION ~ CALL LETTERS

### Station and Operator's Licenses

An operator's license and a "ship station" license, the latter covering equipment, frequencies and call letters, are required from the Federal Communications Commission in order to operate a marine radiotelephone.

It is no longer necessary to take an examination to obtain an operator's license which, although not authorizing the holder to make adjustments and repairs of the equipment, is valid for the normal operation of the station. This type of operator license may now be obtained by "declaration." It is only necessary that the applicant be a citizen of the United States and study a small pamphlet of rules and regulations which he may obtain at any F.C.C. field office. He then makes a personal or mailed application to such office on the necessary forms which are submitted to him. His operator's license, called "Restricted Radiotelephone Operator Permit" is then given or mailed to him.

The application blank for a ship radiotelephone license is also obtainable from the nearest F.C.C. office. It should be filled out in detail, signed and notarized and mailed to the Federal Communications Commission, Washington 25, D. C.

This station license must be posted near the transmitter of the ship.

### Penalties for Violations

It is general knowledge that the entire frequency spectrum in the United States is relatively congested. The Federal Communications Commission has announced that beginning March 7, 1949, F.C.C. monitoring stations and F.C.C. engineers actually assigned on board ship will participate in observing operations in order to enforce proper use of

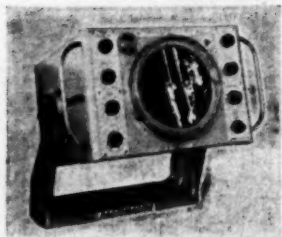
the frequencies 2638 and 2738 kc and the restricted Government frequency 2670 kc. Offending stations will be tracked down, even though they may not identify themselves on the radio channel concerned. F.C.C. engineers will then board these ships, both in port and at sea, and serve such papers as deemed appropriate.

The Communications Act of 1934, as amended, provides severe penalties which may be invoked if violations are found.

The most frequently-observed violations were:

1. The causing of harmful interference by failure of operators to observe the provisions of Rule 8.52 to monitor (listen) on the frequency to be used prior to transmission thereon, in order to determine whether transmission by the station will interfere with communication already in progress.
2. Failure to comply with basic regulations requiring that each station properly identify itself at the beginning and upon completion of each series of transmissions constituting a complete communication (conversation) carried on by such station.
3. The causing of unnecessary transmissions by requesting repetitions from other ship stations of weather reports, due to failure to intercept the transmission of such reports directly from coastal harbor stations.
4. Failure to comply with the provisions of Rule 8.95(a) which limits the use of the frequency 2738 kc solely to distress and safety communications and to communications relating directly to the operation and business of the ship, subject to the priority of communications designated by Rule 8.42.
5. Failure to comply with the provisions of Rule 8.95(b) which limits the use of the frequency 2638 kc primarily to the safety of navigation and to the ship's business. While the exchange of other communications on this frequency is authorized upon the express condition that interference shall not be caused to the primary use of this frequency, many stations are disregarding the primary use of the frequency in attempting to handle other communications.

# If it's **RADIOMARINE** ... you can depend on it



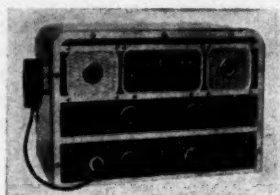
**SMALL  
RADAR  
Model  
CR-103**

**R**ADIOMARINE'S record of dependable performance extends back over a quarter of a century. Dependability ... long life ... simplicity of operation and low-cost upkeep ... these are the rigidly maintained characteristics of all radio-electronic equipment made by Radiomarine.

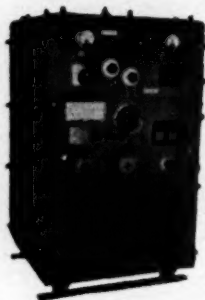


**MODEL ET-8037  
30-watt, 6-channel,  
2-way Radiotelephone**

Operates from 12-, 32- or 110-volt D. C. supply. In wide use aboard small coastwise vessels, tugs, trawlers and pleasure craft.

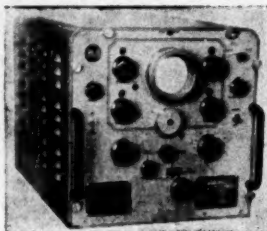


**MODEL ET-8044  
5-watt, 4-channel  
Radiotelephone with  
Standard Broadcast Radio**



**MODEL ET-8012-D  
75-watt, 10-channel,  
2-way Radiotelephone**

Requires 32- or 110-volt D. C. power supply. Ideal for ocean-going vessels, river and lake ships, tugs, trawlers, and large pleasure craft. Remote control, from any point aboard ship, is optional.



**DIRECT-READING LORAN  
Model LR-8802**

**MODEL AR-8711  
Radio Direction  
Finder**

Highly sensitive and selective, easily installed where convenient. Loop may be mounted inside or above decks, as required. Has standard broadcast radio band also. Operates from 6, 12, 32 or 115 volts power supply.



## PACIFIC COAST ADDRESSES

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437 North Avalon Blvd., Wilmington, Cal.  
Tel.: Terminal 4-1381

1008 Western Avenue, Seattle, Wash.  
Tel.: Main 7719



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6. Failure to comply with the provisions of Rule 8.94 which imposes a time limitation on the use of the frequencies 2638 and 2738 kc. After any two stations have established contact on either of these frequencies the over-all period of time during which these stations taken together, may exchange transmissions shall not exceed 5 minutes in duration.

After completion of an exchange of transmissions, as limited above, neither of these two frequencies shall again be used for communication between the same two stations until 15 minutes have elapsed. Cross frequency communications, where one station using one of these frequencies communicates with the second station which uses the other frequency, is prohibited. However, the above limitations do not apply to the handling of distress or emergency communications.

7. Use of the frequency 2670. This frequency is assigned for use by stations of the United States Coast Guard and is not available for use by nongovernment ship stations. However, the Coast Guard maintains a listening watch on this frequency for distress calls and in the event of actual distress a ship may use 2670 kc to the Coast Guard in order to obtain help.
8. Failure to maintain equipment in proper adjustment as required by Rules 8.108 and 8.129. Maladjustments of a radiotelephone transmitter may produce radiation outside the authorized communication channel and frequently results in improper modulation which, in turn, causes unnecessary repeating of transmissions and interference.

#### Alaska: U. S. Signal Corps Facilities

Shipowners or lessees contemplating operation in Alaskan waters should inform the nearest office of the Alaska Communication System when radiotelephone equipment has been installed on their ships, as this will permit the A.C.S. to expedite the handling of the ship's radiotelephone calls and keep the shipowners informed of matters of interest regarding ship-shore telephone service. Such information should include the ship's name, home port, call letters, owner's and lessee's names, their land mailing addresses and telephone numbers and, if known, the approximate area in which operation will be conducted. Notification may also be forwarded to Commanding Officer, Alaska Communication System, 550 Federal Office Bldg., Seattle 4, Washington.

The A.C.S. maintains a continuous receiver watch on 2134 kc at its Anchorage, Ketchikan and Juneau stations. In answering calls, Anchorage uses 2980 and 2970 kc, Ketchikan 2960 and 2970, and Juneau 2894 and 2970. The second-named frequency, 2970, is used only upon request of the calling vessel. Fourteen other stations in Alaska maintain a day-time watch on 2134 kc, transmitting on 2970.

A continuous watch is maintained at Anchorage, Ketchikan and Juneau on 500 kc and a part time watch at ten other stations on 500 kc, which permits dependable contact for ships in Alaskan waters at all times.

#### How to Radiophone the Coast Guard

Small craft not equipped to transmit radio signals on 500 kc are authorized to use 2670 kc for making distress calls only. All Coast Guard radio stations, most lifeboat stations, cutters and larger patrol boats maintain a radio guard of 2670 kc.

Here is the way to call the USCG in distress calls for aid to the boat or persons aboard:

1. Speak slowly and distinctly into the microphone.
2. Make your call: "Coast Guard, this is (name of your vessel, call letters and description of your trouble, your position, course, speed, type of assistance required, such as removal of persons in danger, tow to nearest safe anchorage, etc.)."
3. After making your distress call, listen for the Coast Guard reply on 2670 kc.
4. It is better for the Coast Guard to maintain direct contact with the vessel in distress, and every effort should be made to establish this contact rather than a contact through another vessel.
5. The facilities of the Pacific Telephone & Telegraph Company's ship telephone service are available for distress calls. The company's stations will forward distress calls and messages to the appropriate Coast Guard office.
6. If the condition which caused you to call should moderate, or render aid unnecessary, be sure to notify the Coast Guard so that its vessel or aircraft under way to you may be diverted.

#### Ship Telephone Service

Ship telephone service, through the facilities of the Pacific Telephone & Telegraph Company, provides a two-way telephone communication service between a telephone on land and a boat equipped with a suitable radiotelephone.

Through the telephone company's land radiotelephone stations communication between two boats can also be carried on.

The service has been provided to meet the requirements of ocean-going vessels as well as coastal and harbor craft such as yachts, fishing vessels, tugs, when within range of a telephone company's land radiotelephone station. It is available to all types of vessels 24 hours a day.

The ship telephone service facilities of the Pacific Telephone & Telegraph Co. include six shore stations on the Pacific Coast. These are connected by the telephone company's land wire facilities to centrally located long distance switchboards where the telephone operators establish connections to telephones in the local service areas or to long distance points.

Land radiotelephone stations located on the Pacific Coast for rendering this service are:

| Tel. Co.              | Vessel    | Vessel    |         |
|-----------------------|-----------|-----------|---------|
| Station Call          | Letters   | Frequency | On      |
| Letters               | Frequency | Frequency |         |
| Seattle, Wash.        | KOW       | 2126 ke   | 2522 ke |
| Astoria, Ore.         | KFX       | 2206 ke   | 2508 ke |
| Portland, Ore.        | KQX       | 2206 ke   | 2508 ke |
| Eureka, Calif.        | KOE       | 2110 ke   | 2506 ke |
| San Francisco, Calif. | KLH       | 2110 ke   | 2506 ke |
| San Pedro, Calif.     | KOU       | 2174 ke   | 2506 ke |

Any vessel which is equipped with radiotelephone equipment, properly licensed by the Federal Communications Commission for operation of a radio station, is eligible for the service and may obtain it by application to the nearest business office of the Pacific Telephone and Telegraph Company.

A similar coastal harbor service is available in British Columbia waters as follows:

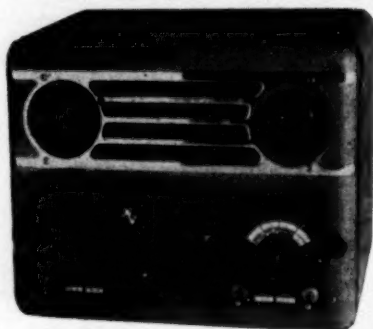
| Tel. Co.      | Vessel    | Vessel      |
|---------------|-----------|-------------|
| Station       | Calls on  | Receives on |
| Frequency     | Frequency | Frequency   |
| Vancouver     | 2182 ke   | 2538 ke     |
| Vancouver     | 2142 ke   | 2558 ke     |
| Vancouver     | 5555 ke   | 5420 ke     |
| Vancouver     | 156.93 mc | 161.61 mc   |
| Prince Rupert | 2166 ke   | 2590 ke     |

Additional information may be obtained from the Northwest Telephone Company, 768 Seymour Street, Vancouver, B. C.

### Classes of Service

"General Service" is recommended for random calls. It provides for connection, through the Pacific Telephone & Telegraph Company's land radiotelephone station, between any telephone on land and a vessel, or between two vessels. Calls from telephones on land are routed via the company's radiotelephone station which is nearest to a vessel's last known position.

"Dispatching Service" is recommended principally for commercial vessel operators who find that their communication requirements are principally between



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America's finest radiotelephone

30-40 watts Actual Antenna Power.  
Complete Indication of Performance.  
Full Output under All Conditions.  
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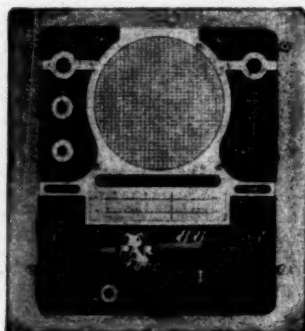
## PAR-fone "88" ➔

Value Plus - Real Performance

Output and modulation indication.  
10 watts at one-third of tube rating.  
Compact—slightly larger than this page.  
Dynamotor power supply.

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## *How to profit most from ship telephone service*

**Two tips** to help you enjoy even better ship-shore service... to make it easier for you to receive calls which mean more business, more safety and comfort at sea—

1. Make it a practice to call ashore regularly each day to see if any calls are being held for you.
2. Tell those ashore who have occasion to call you the best times to reach you—when you'll be listening.

For extra convenience, install selective signalling...and operators will dial you directly!

**To get this free booklet, call  
or write Pacific Telephone in  
your nearest large port city.**



**Pacific Telephone**



their ships and a particular land telephone, such as the home office, a tug dispatcher, etc. This is a service through a designated land radiotelephone station of the telephone company between a designated dispatching office of a subscriber or alternate land telephone station and ships owned or operated by the subscriber.

Information on rates for general and dispatching service may be obtained from any of the telephone company's business offices.

### How to Place Calls

1. In making a radiotelephone call from a ship to a land telephone, listen with your radiotelephone receiver tuned to the transmitting frequency (see transmitting and receiving frequencies, above) of the telephone company's nearest coastal-harbor radiotelephone station to be sure the channel is not busy. A busy condition is indicated by hearing conversation or the conventional busy tone.

2. If the channel is not in use, tune your radiotelephone transmitter to the receiving frequency of the same station, and, after waiting a few seconds, announce the station you are calling, your ship's name, and call sign. Repeat the call slowly at least three times, then wait for the marine operator to answer.

3. When the marine operator answers, tell her the city, telephone number, and, if desired, the name of the person you are calling. In giving the position of your ship, state the latitude and longitude, or if more convenient, state the

rate area as shown on the map in your radiotelephone directory supplied by the telephone company. Proceed thereafter as directed.

4. At the end of the conversation, repeat your ship's name and call sign and announce that you are "Signing off." Turn off the transmitter.

### How to Receive Calls

1. If the ship's receiver is on and tuned to the telephone company's land radiotelephone station transmitting frequency, the marine operator's voice will be heard calling the name of the ship.

2. If your boat is called, operate the transmitter as if to place a call. When the transmitter is ready to function, answer the marine operator by giving your boat's name and call letters.

3. If your receiver is equipped for selective signalling, the marine operator will dial the telephone number assigned to your boat. When your telephone bell is heard, answer as described above.

### Storm and Weather Broadcasts

Frequent daily broadcasts of weather information and hydrographic information are made by the various Coast Guard radio stations in California, Oregon and Washington. Hours, frequencies and nature of broadcasts are detailed in local notices to Mariners, available on request.

Weather information is likewise broadcast by the following shore stations:

| Station               |     | Frequency          | Time—PST                   |
|-----------------------|-----|--------------------|----------------------------|
| Point Higgins, Alaska | NMJ | 410 kc*<br>2698 kc | 2130 & 0930<br>2200 & 1000 |
| Prince Rupert, B. C.  | VAJ | 1630 kc            | 2230                       |
| Alert Bay, B. C.      | VAF | 1630 kc            | 2100                       |
| Vancouver, B. C.      | CZO | 2538 kc<br>2558 kc | 2030<br>2030               |
| Westport, Wash.       | NMW | 425 kc*<br>2698 kc | 2100 & 0900<br>2130 & 0930 |
| Seattle, Wash.        | KOW | 2522 kc            | 2100 & 0900                |
| Astoria, Ore.         | KFX | 2598 kc            | 2115 & 0915                |
| Portland, Ore.        | KQX | 2598 kc            | 2130 & 0930                |
| Eureka, Calif.        | KOE | 2598 kc            | 2100 & 0900                |
| San Francisco, Calif. | KLH | 2506 kc            | 2030 & 0830                |
| San Francisco, Calif. | NMC | 425 kc*<br>2698 kc | 2000 & 0800<br>2030 & 0830 |
| Monterey, Calif.      | NOJ | 2698 kc            | 1648 & 0448                |
| San Pedro, Calif.     | KOU | 2506 kc            | 2000 & 0800                |
| Long Beach, Calif.    | NMQ | 425 kc*<br>2698 kc | 2030 & 0830<br>2100 & 0900 |

\* Key broadcast only (code).

Small craft and storm warnings are flown from various Coast Guard light stations, lightship stations, and lifeboat stations along the Pacific Coast.

## British Columbia

Ship to shore radiotelephone service is handled in British Columbia by the North-west Telephone Company. Their Vancouver station CFW transmits on three frequencies: namely, 2538 kc, which is assigned for fishboat use; 2558 kc, assigned for use of tugboats, coastal vessels, yachts, etc.; and 5420 kc, common to all craft and used mostly when vessels are over 200 miles from the station. The associated frequencies on the ship's transmitter are 2182, 2142 and 5555 kc.

To place a call listen in on 2538, 2558 or 5420 kc and, if the channel is not busy, call Vancouver and proceed thereafter as directed by the operator. Calls may be placed to CFW at any time. To obviate the necessity of vessels monitoring continuously, CFW maintains clearance periods at 7:30, 9:00 and 11:00 a. m.;

1:15, 4:15, 6:30 and 9:45 p. m. when calls held for vessels will be broadcast. Listen in on your assigned frequency at these times.

Station CFW4 at Prince Rupert transmits on 2590 kc and receives on 2166 kc. They operate on a 24 hour basis, but maintain no clearance periods.

Ship to ship calls may be made over the free frequencies of 1630 and 2318 kc.

Distress calls. Upon the receipt of a distress call, CFW will connect the vessel immediately with the number called. If no number is specified, an attempt will be made to contact the owners of the vessel or the operators ashore, and also Point Grey wireless station. On instructions from the vessel, both ship-to-shore channels will be cleared and the distress message broadcast as instructed from the vessel.

Weather reports covering all coastal areas are broadcast from CFW twice daily at 8:30 a.m. and 8:30 p.m.

## CALL LETTERS

For a number of years PACIFIC MOTOR BOAT Handbook has published the radiotelephone listings of Pacific Coast boats as a service to this fast-growing means of communications. However, the telephone companies have recently undertaken to provide up-to-date lists of their subscribers' call letters. Lists of marine radiotelephone users may be obtained from the North-West Telephone Company in British Columbia and from Pacific Telephone & Telegraph Company offices in Washington, Oregon, California.

### NAVIGATION EQUIPMENT!

Apelco Radiotelephones and NW  
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Sard, Bausch & Lomb and  
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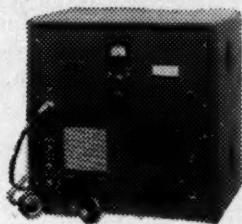
Enjoy the convenience of our free parking lot while you select navigation equipment and charts.

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MANUFACTURERS OF RADIO-  
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314 Bell St. Phone: EL. 0315  
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What good is a boating budget when the boat is gone . . . stolen, wrecked, destroyed by fire or storm?

What good is a budget if stranding, storm or collision causes damage that explodes that budget in a flood of bills for repairs and refitting?

What good is a budget if a water-way accident piles up a judgment against you, fouling your finances and marring your cruising pleasure?

Protect your boating budget—protect your boat! A Yacht Insurance Policy, written through Marine Office of America, will give you sound and dependable protection—protection backed by the strength and security of its seven outstanding member companies.

Yes—there is no stronger, no surer Yacht Insurance protection than that provided through Marine Office of America! Your agent or broker can supply it—see him or call him, today!



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# PREVENTION OF EXPLOSION AND FIRE ON MOTOR BOATS

Explosions on gasoline boats involving loss of life and heavy loss of property have rendered it necessary to take some action in regard to their prevention.

Three things are vital to this —

First, that not a drop of gasoline or any gasoline vapor be allowed to get into the hull outside of tanks, engines and connections.

Gasoline vapor is heavier than air and even in filling a tank on deck, the vapor will flow down any open hatch or companionway and sink to the floor and bilge and remain there unless removed.

Second, that no spark or flame, including oil lanterns, be allowed in engine room that can be avoided.

Third, that all engine compartments be so ventilated that all vapors or gases which may have gathered there be quickly removed.

After examination of many boats and doing everything possible to avoid unnecessary expense, the matter was taken up with The National Board of Fire Underwriters and the following have been considered necessary by their engineers.

That all filling pipes to gasoline tanks must be on outer deck, outside of cockpit and coamings, so that any overflow will run overboard, and that filling pipes run to the bottom of tank.

That all vent pipes to gasoline tanks should lead to outside of hull.

That all tanks should have an indicating device, but such device shall not consist of glass gages other than those of bullseye type, nor of petcocks.

That all outlets for drawing gasoline for any purpose whatsoever be prohibited in engine room.

That all carburetors should have Underwriters' Laboratories approved back-fire flame deflectors, to prevent explosion from backfire.

That all switches and fuses be placed outside of engine compartment. On large boats where it is desired to have all equipment in the engine room, switches and fuses and other spark-emitting devices should be enclosed and located at least 4 feet above the floor.

That all electric light and auxiliary plant tanks have filling pipes run to outer deck same as main tanks, or engines piped directly to main gasoline tanks. Air cooled motors under deck are not approved.

That drip collectors be well fastened

under all carburetors. Openings should be properly screened with 40 mesh brass. Carburetors of the upturned horn type similar to the Zenith or Stromberg, with closed drip pan connected to the lowest point of air horn are recommended. A venturi pipe should lead from the bottom of all drip pans to the manifold, so as to keep these pans, as nearly as possible, free from gasoline at all times.

That there be a cut-off valve at each tank to be operated from the deck, with another valve at each carburetor.

That 3" or larger ventilating pipes running down all the way to bilges be placed in all four corners of engine room, so as to induce a thorough scouring draft through bilges and remove any explosive gases that might lie there.

These should be made so that they CANNOT be closed — the little water that would enter in a heavy sea would be negligible in comparison with the danger of confined gasoline vapors.

At least one of these pipes should be provided with an electric fan to remove gases from the bilges. If suction fan is used, motor must be of explosion-proof type or located outside of vent duct. These fans should be run for at least ten minutes before starting and after shutting down engine. Where boats are so small as to make the electric fans impracticable, the same pipes should be installed with the fans omitted.

## NO VENTILATION ABOVE, EITHER AT DECK OR SIDES WILL REMOVE THESE VAPORS

In still smaller boats already built where the installation of the above ventilating pipes is impossible, an opening of not less than 36 square inches should be cut close down to the cabin floor in both forward and after partitions of engine room to induce a draught, so that the heavy vapors that lie in the bilges may be forced out. A ventilating cowl or port both in the forward and after ends of the boat should always be open, so that a draught be made through the openings in the fore and aft engine compartment partitions.

Gasoline shall not be used for wiping down engines, or machinery, or cleaning hands.

Gasoline stoves or lamps shall never be used on boats.

## PREVENTION OF EXPLOSION IN FILLING GASOLINE TANKS ON YACHTS

Owing to the large number of explosions that have occurred during the last few years on gasoline powered boats just after filling tanks, involving not only a heavy monetary loss but also many lives—

To stop these explosions, it is strongly recommended that before tanks are opened or gasoline brought on board—

All engines, motors, fans and other spark-producing devices be shut down—

That all galley fires be put out—

That all ports, windows, doors and hatches be closed—

That no smoking be permitted while filling—

That in filling tanks, no gasoline whatsoever (not one drop) be allowed to get below deck except into tanks—neglect of this has cost many lives—

Fill with hose—keep nozzle in contact with fill pipe. If cans must be used, see that there is a metal to metal contact between cans, funnels, and fill pipes. Static electric sparks may occur in filling operations if this is not done.

Grounding nozzle of hose or can is necessary if all explosions are to be prevented.

In filling gasoline tanks, etc., allow 1% of cubic air space for each 15 degrees Fahrenheit for expansion. Viz: 90 degrees would need 6% of air space, 130 degrees would need 8.66% or app. 9%.

That after filling hose and, or, cans have been removed from boat, any spillage on deck be wiped up and all ports, windows, doors and hatches be opened and kept open if possible for at least five minutes before any fan, motor, or engine is started or stove lighted.

Approved type carbon-dioxide or automatic carbon-tetrachloride extinguishers recommended.

## BILGE VENTILATION Vitality Important

Losses having occurred recently from inadequate bilge ventilation, that is, the use of 3" or smaller ventilating pipes in boats where from their size, much larger pipes should have been used under the National Board of Fire Underwriters' Regulations of October 7, 1929, the matter was taken up after careful consideration, the table given below was drawn up as the minimum requirements of sizes which might be used.

| Boat               | Ventilating Pipes<br>(2 forward and 2<br>aft in engine<br>room, piped to<br>bilges) |
|--------------------|---|
| 20' and under..... | 3"  |
| 25'.....           | 3½"   |
| 30'.....           | 4"  |
| 35'.....           | 4½"   |
| 45'.....           | 5"  |
| 50'.....           | 5½"   |
| 60'.....           | 6"  |

As a large proportion of losses occur while the boat is at rest and not under way, and as many boats lie at piers or floats and so are often stern to the wind, it follows that to give good ventilation to the bilge at all times, the after ventilators must be fully equal in size to the forward ones.

Experience has proved that these ventilating pipes have been one of the greatest factors in preventing losses and it follows that the more natural draft ventilation given, i.e., the larger the ventilating pipes, the safer the boat.

Further, that all stoves be well fastened down and thoroughly insulated and where alcohol, kerosene or fuel oil is used, especially in wet priming, a catch pan not less than ¼" deep shall be secured inside the frame of the stove. Where liquified or compressed gas is used for cooking, tanks must be placed on deck.

That all pipes penetrating hull under water should be fitted with sea-cocks.

That there be a hand bilge pump large enough to take care of a heavy leak, permanently installed.

That all electric batteries be well secured and located in a well ventilated space and be provided with a protective screen to prevent any metal object being dropped on them.

That there be at least two anchors with 120' of cable for each capable of holding the boat in a heavy gale, one of which should have cable bent on at all times.

That bilges should be kept clean—free from oil and gasoline at all times—neglect of this has cost many lives.

The majority of losses are caused by carelessness. Good housekeeping tends to safety.

Further regulations covering tanks, fuel lines, carburetors, motor exhaust, galleys, diesel installations, and many other items are contained in the National Fire Protection Association Regulations for Motor Craft which will be sent to you upon request to the Yacht Safety Bureau, Room 1708, 21 West Street, New York 6, N. Y.

# Marine Gas Tax Refunds

**G**ASOLINE tax refund procedure varies among the Western states. The boat owner generally has to prove non-highway use in submitting his application to the state authorities, although the procedure is not uniform.

The following information on obtaining state gasoline tax refunds has been compiled from information furnished by various tax authorities. The refunds apply to transients as well as residents.

## British Columbia

**Refund:** 9c of a 10c tax. However, the Province has provided for the sale of non-highway gasoline for marine use, making collection of the 9c highway tax unnecessary.

**Agency:** Office of the Surveyor of Taxes, Victoria, B. C.

**Procedure:** In this Province any person may purchase gasoline specifically marked with a purple dye for certain non-highway uses. Such marked gasoline may be purchased for use in a motor boat. The refundable portion of the tax is waived at the time of the sale of such purple marked gasoline.

## Washington

**Refund:** 6½c of the 6½c per gallon state tax.

**Agency:** Liquid Fuel Tax Division, Department of Licenses, Olympia, Wash.

**Procedure:** First, the applicant must write for application forms. In due course, he receives a letter of instructions, an application for permit and an application for refund. The application for permit must be filled out and returned to Olympia, together with the required fee of 50c. The applicant then receives a permit allowing him to receive gasoline tax refunds. The permit is valid from date of issue to the following March 31.

The applicant may then apply for refund by filling out the application for refund and returning it to Olympia, together with the original sales slips, clearly indicating the number of gallons purchased on each occasion, identity of the seller, and a few other details listed on the refund form. The refund will then be made.

The claim must be received within six months of the date of purchase.

## Oregon

**Refund:** 6c per gallon.

**Agency:** Secretary of State, Salem, Ore.

**Procedure:** A refund application form

must be sent to the above agency, together with the original invoice or a certified copy. The application must be made within a year of the purchase.

## Alaska

**Refund:** None. The territory of Alaska levies a 2c per gallon motor fuels tax. This applies to all types of oils in internal combustion engines. No refunds or exceptions are made to privately-owned motorboats.

## California

**Refund:** 4½c per gallon less 3 per cent of net sales price for California sales tax.

**Agency:** State Controller, the State of California, Sacramento, Calif.

**Procedure:** Application for refund must be made on a printed form supplied for this purpose. Forms may be secured from gasoline dealers or from the state controller. Application must be submitted to the state controller within one year from date of purchase of gasoline and must be supported by customer's invoices billed to the claimant, showing complete information regarding the sale.

## Nevada

**Refund:** 5½c per gallon.

**Agency:** Nevada Tax Commission, Motor Vehicle Fuel Tax Division, Carson City, Nevada.

**Procedure:** Full tax is refundable upon application within six months. The state law requires that the claim be accompanied by original invoices marked paid.

## Arizona

**Refund:** 5c per gallon.

**Agency:** Gasoline Tax Refund Department, Division of Motor Vehicles, Arizona Highway Department, Phoenix, Arizona.

**Procedure:** The user of gasoline for non-highway use must inform the seller of such use, asking for a certified invoice on each delivery. Gasoline for boat use is required by law to be colored with the state dye. The highway department furnishes affidavit forms to all claimants for state tax. Such affidavits are to be completely executed and supported by certified invoices, Form 577, and filed within six months of purchase.

## Idaho

**Refund:** 6c per gallon.

**Agency:** Office of Tax Collector, Mo-

tor Fuels Division, State of Idaho, Boise, Idaho.

**Procedure.** An affidavit form, furnished by the department, must be filled out, witnessed and presented. Original receipted invoices must accompany the application for refund. Applications must

be made within 180 days of purchase. Total claims must be for 50 gallons or more.

#### Montana

**Refund** 6c per gallon.

**Agency:** Board of Equalization, State of Montana, Helena, Montana.

### BEAUFORT SCALE

| Beaufort No. | Seaman's Description of Wind | Wave Description        | Mode of Estimating for Average Sail Boat           | Velocity in Knots | Terms Used by U.S. Weather Bur. |
|--------------|------------------------------|-------------------------|--|-------------------|---------------------------------|
| 0            | Calm                         | None                    | No headway   | Less than 1       | Light                           |
| 1            | Light air                    | Ripples                 | Good steerage way with wind free                   | 1-3               |                                 |
| 2            | Light breeze                 | Scale patterns          | 1-2 knots "full and by"                            | 4-6               |                                 |
| 3            | Gentle breeze                | Glassy breaks           | 3-4 knots "full and by"                            | 7-10              | Gentle                          |
| 4            | Moderate breeze              | Longer waves            | 5-6 knots "full and by"—heels                      | 11-16             | Moderate                        |
| 5            | Fresh breeze                 | Occasional white crests | Good working breeze. Smacks heel over considerably | 17-21             | Fresh                           |
| 6            | Strong breeze                | Regular white crests    | Smacks shorten sail                                | 22-27             | Strong                          |
| 7            | Moderate gale                | Heaping sea             | Smacks remain in harbor; at sea, lie to            | 28-33             |                                 |
| 8            | Fresh gale                   | Foam is blown           | Smacks take shelter if possible                    | 34-40             | Gale                            |
| 9            | Strong gale                  | Sea rolls               | .....  | 41-47             |                                 |
| 10           | Whole gale                   | Sea churns white        | .....  | 48-55             | Whole gale                      |
| 11           | Storm                        | Chaotic sea             | .....  | 56-65             |                                 |
| 12           | Hurricane                    | !!!                     | No canvas can stand                                | Above 65          | Hurricane                       |

### READING THE BAROMETER

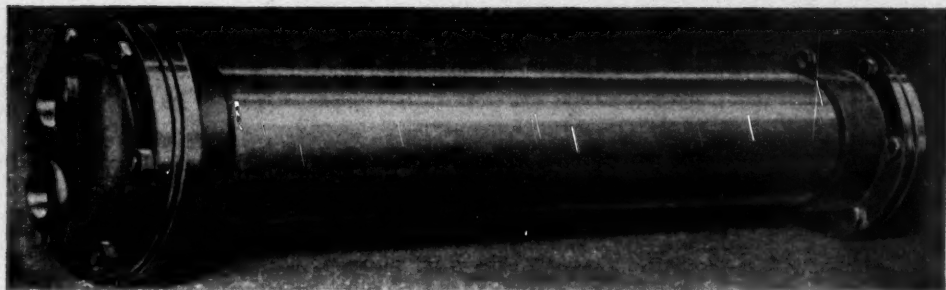
#### Barometer Rising

28.8 to 29.2 inches. Clearing, high winds and cool wave.  
 29.2 to 29.6 inches. High winds, cool wave, preceded by squalls.  
 29.6 to 29.9 inches. Fair weather, fresh winds during next 24 hours.  
 29.9 to 30.2 inches. Fair weather and brisk winds, diminishing.  
 30.2 to 30.5 inches. Fair weather, cooler, variable winds.  
 30.5 to 30.8 inches. Continued cool, clear weather, light winds.  
 30.8 to 31.0 inches. High winds, southeast with rain.

#### Barometer Falling

30.8 to 30.5 inches. Fair, warmer, followed by rain and wind.  
 30.5 to 30.2 inches. Approaching storm.  
 30.2 to 29.9 inches. Cloudy, warmer, unsettled weather.  
 29.9 to 29.6 inches. Unsettled weather, warmer with increasing wind.  
 29.6 to 29.3 inches. Squally, clearing, fair and cooler weather.  
 29.3 to 29.0 inches. Clearing, high winds with squalls and cooler weather.  
 29.0 to 28.7 inches. Stormy weather.





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WRITE FOR LITERATURE

**Sutton Manufacturing Corp.**  
112 W. WILSON AVENUE NORFOLK, VIRGINIA

EQUIPMENT REQUIREMENTS FOR PLEASURE AND COMMERCIAL FISHING MOTORBOATS<sup>1</sup>

| Equipment                       | Class A   |  |  | Class 1  |  | Class 2  |  | Class 3  |  |
|---------------------------------|---|--|--|--|--|--|--|--|--|
|                                 | 0 to less than 16 feet  |  |  | 16 to less than 26 feet  |  | 26 to less than 40 feet  |  | 40 to not more than 65 feet                                      |  |
| Combination light               | 1 in fore part of boat showing red to port and green to starboard from right ahead to 2 points abaft the beam. Visible at least 1 mile.   |  |  | None   |  | None   |  | None   |  |
| Port side light                 | None  |  |  | None   |  | 1 on port side, properly screened to show red from right ahead to 2 points abaft the beam, visible at least 1 mile.                            |  |  |  |
| Starboard side light            | None  |  |  | None   |  | 1 on starboard side properly screened to show green from right ahead to 2 points abaft the beam. Visible at least 1 mile.                      |  |  |  |
| Stern light                     | 1 bright white light aft showing all around the horizon. Visible at least 2 miles.  |  |  |  |  |  |  |  |  |
| Bow light                       | None  |  |  | None   |  | 1 bright white light in the fore part of the boat showing from right ahead to 2 points abaft the beam on both sides. Visible at least 2 miles. |  |  |  |
| Whistle <sup>2</sup>            | None  |  |  | 1 hand, mouth, or power-operated, audible at least $\frac{1}{2}$ mile.                         |  | 1 hand or power-operated audible at least 1 mile.  |  | 1 power-operated audible at least 1 mile.                        |  |
| Bell                            | None  |  |  | None   |  | 1 which produces, when struck, a clear bell-like tone of full round characteristics.   |  |  |  |
| Lifesaving devices <sup>3</sup> | 1 approved life preserver or ring buoy or buoyant cushion for each person on board.   |  |  |  |  |  |  | 1 approved life preserver or ring buoy for each person on board. |  |
| Flame arrestors                 | 1 approved on each carburetor of all gasoline engines installed after Apr. 25, 1940, except outboard motors.  |  |  |  |  |  |  |  |  |
| Ventilation                     | At least 2 ventilators with cowls or equivalent capable of removing gases from the bilges in engine and fuel tank compartments of boats constructed or decked after Apr. 25, 1940, using gasoline or other fuel of a flashpoint less than 110° F. |  |  |  |  |  |  |  |  |
| Fire extinguishers              | 1 1-quart carbon tetrachloride or 1 1½-gallon foam or 1 4-pound CO <sub>2</sub> extinguisher.<br>None required on pleasure outboard motorboats.   |  |  | 2 1-quart carbon tetrachloride or 2 1½-gallon foam or 2 4-pound CO <sub>2</sub> extinguishers. |  | 2 1-quart carbon tetrachloride or 3 1½-gallon foam or 3 4-pound CO <sub>2</sub> extinguishers.   |  |  |  |

<sup>1</sup> Act of Congress approved April 25, 1940.<sup>2</sup> Commercial fishing motorboats may carry any of these specified devices.<sup>3</sup> Commercial fishing motorboats may carry in lieu of this specified equipment prescribed wooden life floats.

## Entering & Clearing Foreign Ports

**E**NTERING pleasure craft and motor driven commercial boats from a foreign port, or entering a foreign port from the United States, or clearing from a foreign port to a United States port, or clearing from a United States port for a foreign port is usually a simple matter for most yachtsmen and small boat operators.

Enrolled or licensed yachts are not required to clear for foreign ports. All other documented vessels and undocumented vessels are required to clear.

However, numbered vessels under five net tons do not have to clear from the American ports of Friday Harbor and Anacortes to Canada. Neither are they required to officially enter upon their return. However, it is requested that they report out and it is necessary for them to report to Customs upon their return.

On entering the foreign port the captain and owner should report immediately to the customs and immigration authorities at the port at which entry is made, and none of the guests or crew, except the captain or owner, may leave the vessel, and then only to report its arrival to customs, until the inspector has examined the vessel and passed it.

Leaving a foreign port, if a cruising permit has been issued, this permit should be surrendered to the issuing authority. Foreign customs and immigration authorities will clarify any other restrictions to be imposed upon the boat, and requirements should be strictly followed.

Entering the United States from a foreign port, the owner or captain must report within 24 hours of the boat's arrival to the customs, and the captain should not allow guests or crew to go ashore from the boat until the customs inspector has examined the boat and baggage of the crew, etc. A report should be made to immigration authorities immediately upon arrival. Documented boats 16 gross tons or over are required to enter and file a manifest at the customs house whether or not passengers or merchandise are aboard.

American documented yachts are ex-

empt from clearance and entrance from one American port to another American port and in sailing to a foreign port. On arrival from a foreign port such arrival must be reported within 24 hours and large yachts of 16 gross tons or over regularly entered within 48 hours. Arrival may be reported by telephone but all crew, passengers and their baggage must remain on board until released by Customs.

If a yacht is going foreign and sailing from an American port when sanitary conditions are bad or contagious diseases prevail she must obtain a bill of health. This also applies again in arriving from a foreign port where the same conditions exist.

All documented yachts over 15 gross tons or undocumented yachts or pleasure boats must enter and pay entrance fees.

Vessels and airplanes entering and clearing at Friday Harbor, Wash., will not be required to pay the usual customs and immigration overtime charges for services rendered on Sundays and holidays between June 17 to September 3, from 9 a.m. to 5 p.m.

The Commissioner of Customs may issue to American yachts belonging to a regularly organized or an incorporated yacht club a commission to sail for pleasure, stating therein the exemptions and privileges enjoyed under it and shall be a token of credit to any U.S. official, and to the authorities of any foreign power, for privileges enjoyed under it. On return such yacht must enter and surrender the commission at the custom house.

The British Columbia authorities issue a cruising permit which will be given upon request upon arrival at the first Canadian customs port. This allows full privileges of free entry and clearance in all B. C. waters, but must be returned to the port of issuance before departure from British Columbia.

A Canadian yacht can obtain a cruising permit in much the same manner from U. S. Customs authorities. The Canadian yacht must telephone the U. S. customs and report each movement between U. S. ports, however. Such permits may be issued for a period not to exceed six months, but must be surrendered upon departure from the last United States customs port.

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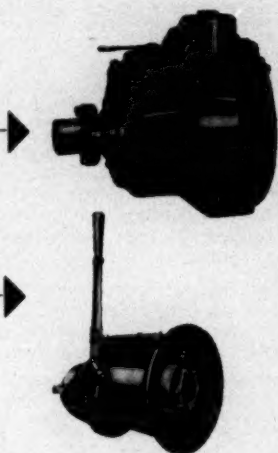
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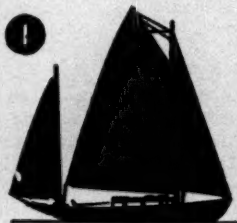
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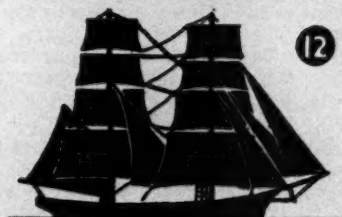
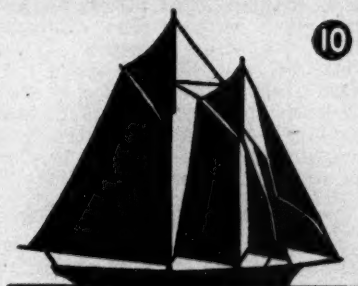
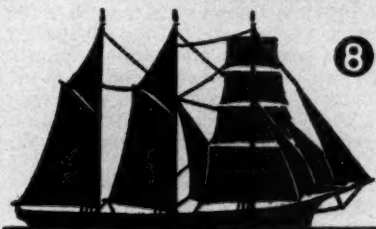
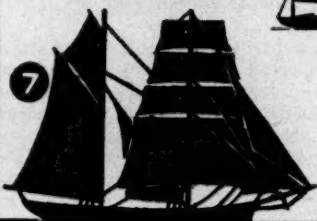
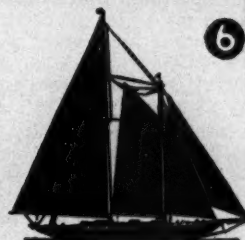
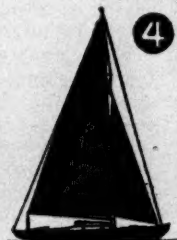
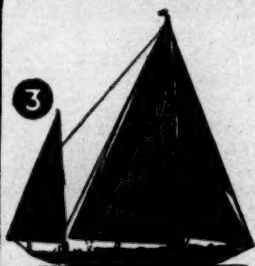
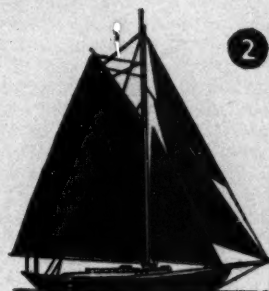


## TYPES OF SAILING BOATS



1. Yawl; 2. Cutter; 3. Ketch; 4. Sloop; 5. Cat-Boat; 6. Schooner (the foresail is gaff-rigged the mainsail is Marconi-rigged); 7. Hermaphrodite Brig; 8. Barkentine; 9. Bark; 10. Trys'l schooner; 11. Full-rigged Ship; 12. Brig. A Brigantine is the same, but without a square mainsail.

NOTE: No. 6 illustrates the difference in outline between a Marconi rig and a gaff rig. No. 5 illustrates a sliding gaff rig. No. 10 shows the gaff-topsails at the top of the mast.



# CHARTS

Charts are the most important tools used in navigation. Charts include an accurate topographic survey and characteristics of the land as visible to the mariner. The hydrographic survey shows the data for the water areas. Along the Pacific Coast depths in tidal areas are shown at mean lower low water by the U. S. Coast & Geodetic Survey. Charts issued by The Canadian Hydrographic Service show soundings reduced to the lowest normal tides.

Charts, while nearly accurate, are subject to a distortion which arises from representing the curved form of the earth on a flat piece of paper. Most of the charts in general use by navigators are constructed on the Mercator projection and these charts are called Mercator Charts.

On these charts all the parallels of latitude, running true east and west, are at right angles to the meridians. The meridians, running true north and south, are parallel straight lines, and the longitude degrees are all equal. The degrees of latitude increase in length from the lowest degree of latitude at the bottom of the chart to the highest parallel at the top of the chart in the same proportion as the degrees of longitude decrease on the earth. The ship's true course appears on the chart as a straight line.

## COMPASS ROSE

On all charts are one or more compass roses. A compass rose is the same as a compass card placed on a chart. The outer ring of the compass rose shows the true compass in degrees, while inside of this ring shows the magnetic compass. In the inner or magnetic compass, the arrow points to magnetic north. The compass rose also shows the amount of variation in the location and the annual change in variation.

## CORRECTING CHARTS

All U. S. charts are kept corrected, and the date is stamped on the face of the chart when issued by the government office. Dates on charts are on the lower margin: the new edition date is in the central position; printing dates are noted in the lower left margin; issue date is stamped in the lower right margin.

After purchase, charts should be kept corrected from the remarks in the Notices to Mariners as soon as received. It is recommended that charts of the latest issue be purchased and kept cor-

rected up to date. Corrections can be obtained by taking them to the nearest Hydrographic Office.

## CHART SCALES

Charts are constructed on different scales. Small scale charts covering large areas are used for offshore navigation, and all things will be shown in a small scale. Large scale charts show relatively small areas in greater detail and should be used for inshore or harbor navigation. A scale of 1:50,000 means that one unit of the chart represents 50,000 of the same units on the surface of the earth. Scales range from 1:2,500 to about 1:5,000,000.

Sailing charts are issued in scales of 1:600,000 and smaller, and are used for approaching the coast from the open ocean or for sailing between different coastwise points.

General charts, scale 1:100,000 to 1:600,000, are planned for coastwise navigation outside of outlying reefs and shoals.

Coast charts, scale 1:50,000 to 1:100,000, are planned for inshore navigation; for entering large bays and harbors; and for navigating large inland waterways.

Harbor charts are constructed on scales larger than 1:50,000, and are for navigating in harbors, anchorage areas, and smaller waterways where the maximum detail is helpful in using these waters.

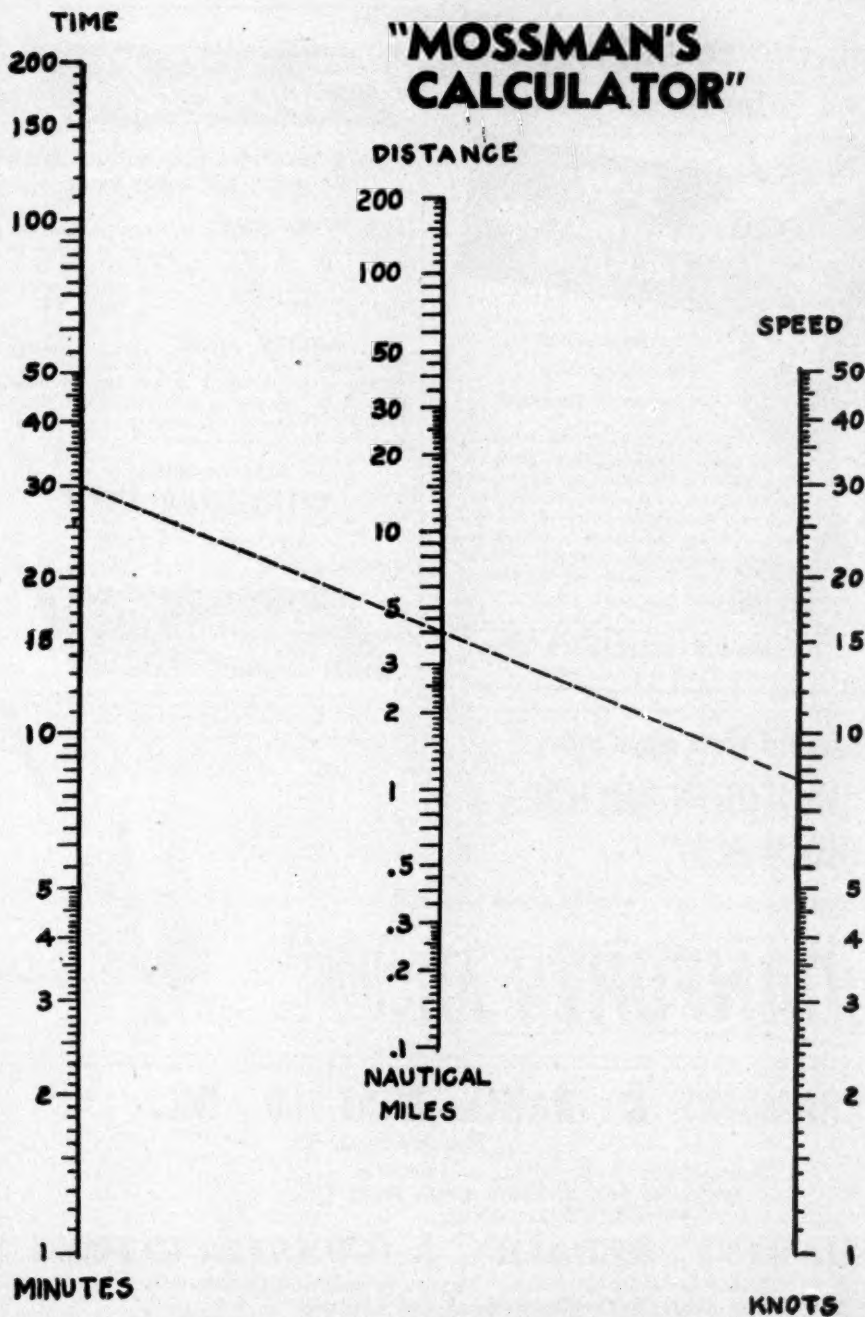
## MINUTES OF LATITUDE

Minutes of latitude are shown on a scale on either side of the chart. A nautical mile is a minute of an average great circle of the earth or 6080.2 feet, or less 1853.25 meters. By referring to the scale on the side of the chart, distance in nautical miles may be quickly determined.

## SOUNDINGS

Soundings, or the depth of water, is shown on a chart in fathoms or feet under the title of the chart. A fathom is a measurement of six feet. It is stated on each chart whether the soundings are in fathoms or feet. On a large scale chart where the survey is complete, the soundings are numerous.

On all coastwise charts and some other charts, a dotted line along the coast indicates that all soundings inside this line near the shore are all under a certain amount. These compare to contour lines on a topographic map.



GIVEN ANY TWO QUANTITIES of speed—distance—time problem, solve for the third by placing a straight edge on the known points on two scales and reading the unknown on the intersection of straight edge and third scale. For example, see dotted line. An 8-knot vessel will require 30 minutes to cover 4 miles, etc. Reproduced by permission of the designer.

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# SPEED TABLE

By timing the run of a vessel over either a measured land mile course or nautical mile course, and identifying the time in minutes and seconds with the nearest time on this table, the speed of the vessel can be obtained with a high degree of accuracy. Thus, if four minutes and 11 seconds were required to run the course, the speed would be 14.345 m.p.h. or knots, as the case may be.

| Sec. | 1 min. | 2 min. | 3 min. | 4 min. | 5 min. | 6 min. | 7 min. | 8 min. | 9 min. | 10 min. | 11 min. | 12 min. |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 0    | 60.000 | 30.000 | 20.000 | 15.000 | 12.000 | 10.000 | 8.571  | 7.500  | 6.667  | 6.000   | 5.455   | 5.000   |
| 1    | 59.016 | 29.752 | 19.890 | 14.938 | 11.960 | 9.972  | 8.551  | 7.484  | 6.654  | 5.990   | 5.446   | 4.993   |
| 2    | 58.064 | 29.508 | 19.780 | 14.876 | 11.921 | 9.945  | 8.531  | 7.469  | 6.642  | 5.980   | 5.438   | 4.986   |
| 3    | 57.143 | 29.268 | 19.672 | 14.815 | 11.881 | 9.917  | 8.511  | 7.453  | 6.630  | 5.970   | 5.430   | 4.979   |
| 4    | 56.250 | 29.032 | 19.565 | 14.754 | 11.842 | 9.890  | 8.491  | 7.438  | 6.618  | 5.960   | 5.422   | 4.972   |
| 5    | 55.384 | 28.800 | 19.459 | 14.694 | 11.803 | 9.863  | 8.471  | 7.423  | 6.606  | 5.950   | 5.414   | 4.965   |
| 6    | 54.545 | 28.571 | 19.355 | 14.634 | 11.765 | 9.836  | 8.451  | 7.407  | 6.593  | 5.941   | 5.405   | 4.959   |
| 7    | 53.731 | 28.346 | 19.251 | 14.575 | 11.726 | 9.809  | 8.431  | 7.392  | 6.581  | 5.931   | 5.397   | 4.954   |
| 8    | 52.941 | 28.125 | 19.149 | 14.516 | 11.688 | 9.783  | 8.411  | 7.377  | 6.569  | 5.921   | 5.389   | 4.945   |
| 9    | 52.174 | 27.907 | 19.048 | 14.458 | 11.650 | 9.756  | 8.392  | 7.362  | 6.557  | 5.911   | 5.381   | 4.938   |
| 10   | 51.428 | 27.692 | 18.947 | 14.400 | 11.613 | 9.730  | 8.372  | 7.347  | 6.545  | 5.902   | 5.373   | 4.931   |
| 11   | 50.704 | 27.481 | 18.848 | 14.343 | 11.576 | 9.704  | 8.353  | 7.332  | 6.534  | 5.892   | 5.365   | 4.925   |
| 12   | 50.000 | 27.273 | 18.750 | 14.286 | 11.538 | 9.677  | 8.333  | 7.317  | 6.522  | 5.882   | 5.357   | 4.918   |
| 13   | 49.315 | 27.068 | 18.653 | 14.229 | 11.502 | 9.651  | 8.314  | 7.302  | 6.510  | 5.873   | 5.349   | 4.911   |
| 14   | 48.648 | 26.866 | 18.557 | 14.173 | 11.465 | 9.626  | 8.295  | 7.287  | 6.498  | 5.863   | 5.341   | 4.905   |
| 15   | 48.000 | 26.667 | 18.461 | 14.118 | 11.429 | 9.600  | 8.276  | 7.273  | 6.486  | 5.854   | 5.333   | 4.898   |
| 16   | 47.368 | 26.471 | 18.367 | 14.062 | 11.392 | 9.574  | 8.257  | 7.258  | 6.475  | 5.844   | 5.325   | 4.891   |
| 17   | 46.753 | 26.277 | 18.274 | 14.008 | 11.356 | 9.549  | 8.238  | 7.243  | 6.463  | 5.835   | 5.318   | 4.885   |
| 18   | 46.154 | 26.087 | 18.182 | 13.953 | 11.321 | 9.524  | 8.219  | 7.229  | 6.452  | 5.825   | 5.310   | 4.878   |
| 19   | 45.570 | 25.899 | 18.090 | 13.900 | 11.285 | 9.499  | 8.200  | 7.214  | 6.440  | 5.816   | 5.302   | 4.871   |
| 20   | 45.000 | 25.714 | 18.000 | 13.846 | 11.250 | 9.474  | 8.182  | 7.200  | 6.429  | 5.806   | 5.294   | 4.865   |
| 21   | 44.444 | 25.532 | 17.910 | 13.793 | 11.215 | 9.449  | 8.163  | 7.186  | 6.417  | 5.797   | 5.286   | 4.858   |
| 22   | 43.902 | 25.352 | 17.822 | 13.740 | 11.180 | 9.424  | 8.145  | 7.171  | 6.406  | 5.788   | 5.278   | 4.852   |
| 23   | 43.373 | 25.175 | 17.734 | 13.688 | 11.146 | 9.399  | 8.126  | 7.157  | 6.394  | 5.778   | 5.270   | 4.845   |
| 24   | 42.857 | 25.000 | 17.647 | 13.636 | 11.111 | 9.375  | 8.108  | 7.143  | 6.383  | 5.769   | 5.263   | 4.839   |
| 25   | 42.353 | 24.828 | 17.561 | 13.585 | 11.077 | 9.351  | 8.090  | 7.129  | 6.372  | 5.760   | 5.255   | 4.832   |
| 26   | 41.860 | 24.658 | 17.476 | 13.534 | 11.043 | 9.326  | 8.072  | 7.115  | 6.360  | 5.751   | 5.248   | 4.826   |
| 27   | 41.379 | 24.490 | 17.391 | 13.483 | 11.009 | 9.302  | 8.054  | 7.101  | 6.349  | 5.742   | 5.240   | 4.819   |
| 28   | 40.909 | 24.324 | 17.308 | 13.433 | 10.976 | 9.278  | 8.036  | 7.087  | 6.338  | 5.732   | 5.233   | 4.813   |
| 29   | 40.450 | 24.161 | 17.225 | 13.383 | 10.942 | 9.254  | 8.018  | 7.073  | 6.327  | 5.723   | 5.225   | 4.806   |
| 30   | 40.000 | 24.000 | 17.143 | 13.333 | 10.909 | 9.231  | 8.000  | 7.059  | 6.316  | 5.714   | 5.217   | 4.800   |
| 31   | 39.561 | 23.841 | 17.062 | 13.284 | 10.876 | 9.207  | 7.982  | 7.045  | 6.305  | 5.705   | 5.210   | 4.794   |
| 32   | 39.130 | 23.684 | 16.981 | 13.235 | 10.843 | 9.184  | 7.965  | 7.031  | 6.294  | 5.696   | 5.202   | 4.787   |
| 33   | 38.710 | 23.529 | 16.901 | 13.187 | 10.811 | 9.160  | 7.947  | 7.018  | 6.283  | 5.687   | 5.195   | 4.781   |
| 34   | 38.298 | 23.377 | 16.822 | 13.139 | 10.778 | 9.137  | 7.930  | 7.004  | 6.272  | 5.678   | 5.187   | 4.774   |
| 35   | 37.895 | 23.226 | 16.744 | 13.091 | 10.746 | 9.114  | 7.912  | 6.990  | 6.261  | 5.669   | 5.180   | 4.768   |
| 36   | 37.500 | 23.077 | 16.667 | 13.043 | 10.714 | 9.091  | 7.895  | 6.977  | 6.250  | 5.660   | 5.172   | 4.762   |
| 37   | 37.113 | 22.930 | 16.590 | 12.996 | 10.682 | 9.068  | 7.877  | 6.963  | 6.239  | 5.651   | 5.165   | 4.756   |
| 38   | 36.735 | 22.785 | 16.514 | 12.950 | 10.651 | 9.045  | 7.860  | 6.950  | 6.228  | 5.643   | 5.158   | 4.749   |
| 39   | 36.364 | 22.642 | 16.438 | 12.903 | 10.619 | 9.023  | 7.843  | 6.936  | 6.218  | 5.634   | 5.150   | 4.743   |
| 40   | 36.000 | 22.500 | 16.364 | 12.857 | 10.588 | 9.000  | 7.826  | 6.923  | 6.207  | 5.625   | 5.143   | 4.737   |
| 41   | 35.644 | 22.360 | 16.290 | 12.811 | 10.557 | 8.978  | 7.809  | 6.910  | 6.196  | 5.616   | 5.136   | 4.731   |
| 42   | 35.294 | 22.222 | 16.216 | 12.766 | 10.526 | 8.955  | 7.792  | 6.897  | 6.186  | 5.607   | 5.128   | 4.724   |
| 43   | 34.951 | 22.086 | 16.143 | 12.721 | 10.496 | 8.933  | 7.775  | 6.883  | 6.175  | 5.599   | 5.121   | 4.718   |
| 44   | 34.615 | 21.951 | 16.071 | 12.676 | 10.465 | 8.911  | 7.759  | 6.870  | 6.164  | 5.590   | 5.114   | 4.712   |
| 45   | 34.286 | 21.818 | 16.000 | 12.632 | 10.435 | 8.889  | 7.742  | 6.857  | 6.154  | 5.581   | 5.106   | 4.706   |
| 46   | 33.962 | 21.687 | 15.929 | 12.587 | 10.405 | 8.867  | 7.725  | 6.844  | 6.143  | 5.573   | 5.099   | 4.700   |
| 47   | 33.644 | 21.557 | 15.859 | 12.544 | 10.375 | 8.845  | 7.709  | 6.831  | 6.133  | 5.564   | 5.092   | 4.693   |
| 48   | 33.333 | 21.429 | 15.789 | 12.500 | 10.345 | 8.824  | 7.692  | 6.818  | 6.122  | 5.556   | 5.085   | 4.687   |
| 49   | 33.028 | 21.302 | 15.721 | 12.457 | 10.315 | 8.802  | 7.676  | 6.805  | 6.112  | 5.547   | 5.078   | 4.681   |
| 50   | 32.727 | 21.176 | 15.652 | 12.414 | 10.286 | 8.780  | 7.660  | 6.792  | 6.102  | 5.538   | 5.070   | 4.675   |
| 51   | 32.432 | 21.053 | 15.584 | 12.371 | 10.256 | 8.759  | 7.643  | 6.780  | 6.091  | 5.530   | 5.063   | 4.669   |
| 52   | 32.143 | 20.930 | 15.517 | 12.329 | 10.227 | 8.738  | 7.627  | 6.767  | 6.081  | 5.531   | 5.056   | 4.663   |
| 53   | 31.858 | 20.809 | 15.451 | 12.287 | 10.198 | 8.717  | 7.611  | 6.754  | 6.071  | 5.513   | 5.049   | 4.657   |
| 54   | 31.579 | 20.690 | 15.385 | 12.245 | 10.169 | 8.696  | 7.595  | 6.742  | 6.061  | 5.505   | 5.042   | 4.651   |
| 55   | 31.304 | 20.571 | 15.319 | 12.203 | 10.141 | 8.675  | 7.579  | 6.729  | 6.050  | 5.496   | 5.035   | 4.645   |
| 56   | 31.034 | 20.455 | 15.254 | 12.162 | 10.112 | 8.654  | 7.563  | 6.716  | 6.040  | 5.488   | 5.028   | 4.639   |
| 57   | 30.769 | 20.339 | 15.190 | 12.121 | 10.084 | 8.633  | 7.547  | 6.704  | 6.030  | 5.479   | 5.021   | 4.633   |
| 58   | 30.508 | 20.225 | 15.126 | 12.081 | 10.056 | 8.612  | 7.531  | 6.691  | 6.020  | 5.471   | 5.014   | 4.627   |
| 59   | 30.250 | 20.112 | 15.063 | 12.040 | 10.028 | 8.592  | 7.516  | 6.679  | 6.010  | 5.463   | 5.007   | 4.621   |

# Pacific Coast Harbors

The principal harbors used by pleasure and commercial craft on the Pacific Coast are shown on the following pages. Many of the maps shown in this edition are new or completely revised, compiled from the latest government charts and information supplied by port authorities. Detailed description of the facilities of each port accompanies the maps.

*PACIFIC MOTOR BOAT'S Harbors section is intended only to supplement government charts and Coast Pilots and should not be used for navigation purposes. Channels, depths and dangers are not generally shown.*

In 1951 every major oil company was asked to locate its marine service stations where facilities for servicing small boats are available. These are indicated on the various harbor maps.

Location of major yacht club moorings, where facilities are available to visiting members of other yacht clubs, are shown for most harbors.

North indicated on the maps is true north.

## KEY TO MAP SYMBOLS

The various symbols on the maps and what they designate are shown



.....*Public Yacht Harbors.*



.....*Fuel and Lubricating Oil Stations.*

White letter "S" in black dot indicates Standard Oil Co. station. "U" stations, Union Oil Co. "B" indicates British American Oil Co. stations in British Columbia, which accept Union credit cards. Black "S" in white dot indicates Shell Oil Co. "A" in black dot indicates Associated. "G" designates locations of General Petroleum stations. "H" shows stations of the Home Oil Co. of British Columbia. Plain black dots designate miscellaneous supply stations.



.....*Yacht Clubs.*



.....*Small Craft Landings and Moorages.*



.....*Small Craft Anchorages.*



.....*Drawbridges.*



.....*Weather Signals, Storm Warnings.*

# ALASKA

## Harbors

**A**LASKA offers unparalleled cruising waters to well-equipped pleasure craft as well as a livelihood to the thousands of boats engaged in commercial fisheries.

From Puget Sound in Washington to Cape Spencer in southeastern Alaska there is a system of narrow straits with deep water known as the Inside Passage. There are numerous rocks and reefs but a general absence of extensive shoals except at the mouths of glacial-fed streams.

Southeastern Alaska consists of a narrow strip of continental land, together with Alexander Archipelago, a vast chain of islands lying near the mainland. Here are found some of the most interesting cruising waters.

Between Yakutat Bay and Cape St. Elias, the coast is fairly regular. The great Malaspina glacier borders a section of this coast.

From Cape St. Elias to Cook Inlet the coast is rocky and deep, as is the south side of the Alaska peninsula and the off-lying islands.

The Aleutian Islands are rugged and mountainous, with numerous islets, rocks, and reefs.

The Bering sea is characterized by shoal waters with extensive sand and mud flats along the shores, particularly in the approaches to the various bays and rivers.

In Southeast Alaska the principal towns are Ketchikan, Craig, Wrangell, Petersburg, Sitka, Douglas, Juneau, Haines, and Skagway. Complete facilities for commercial and pleasure boats are maintained the year around. Numerous small settlements and cannery sites provide limited facilities for supply and repair. The boating season in Alaska generally extends from May to October, the drier season, and the rains, while frequent, are local.

Principal ports of central and western Alaska are Cordova and Valdez in Prince William Sound, Seward in Resurrection Bay, Kodiak on Kodiak Island, Unga and Unalaska to the westward, and Nome and St. Michael in Bering Sea.

### Ketchikan

is located on Revillagigedo Island near the southeastern end of Tongass Narrows. It is the southernmost port of entry into Alaska and contains one of its finest harbors.

The Ketchikan Yacht Club is located in Thomas Basin behind the breakwater and offers mooring for pleasure craft.



KETCHIKAN

A small clubhouse offers a warm lounging room, galley and wash room. Entrance to the basin will accommodate boats up to 6-foot draft at low tide, with fresh water alongside moorings. Harbor anchorage behind the new breakwater is safe in all weather. The confined channel admits no sea and tidal currents do not exceed two knots. Ketchikan is the distributing center of the commercial and fishing industries of this part of southeastern Alaska. Oil stations, sawmills, canneries and cold storage plants are located here.

### Wrangell

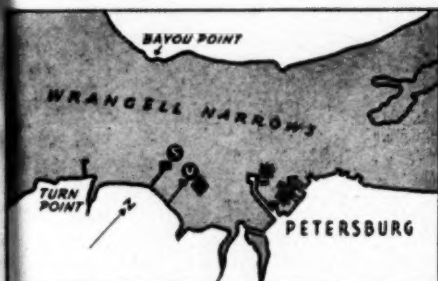
is on the west side of the northern end of Wrangell Island, 1 mile below Point Highfield. A breakwater, 300 feet long, has been constructed from the north extremity of Point Shekesti, and affords protection for small craft in the southern part of the harbor. The several open pile wharves are privately owned

but open to the public on payment of wharfage charges.

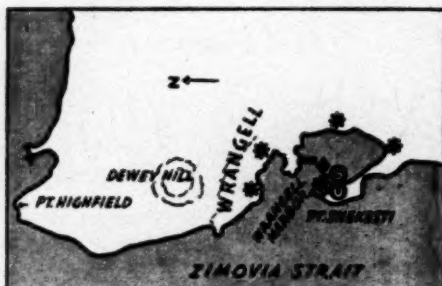
Tidal currents in Wrangell Harbor are variable and approaching vessels should be careful to determine the direction of the current and exercise caution in coming alongside. Several general stores supply provisions, fishermen's supplies and some ship chandlery. There are two companies operating marine ways. There is a well-equipped machine shop where repairs to machinery can be made. Fresh water is available on the main wharves and at oil company floats.

### **Petersburg's**

harbor has been called one of the safest in Southeast Alaska. It is located at the northeastern end of Wrangell Narrows whose entire length is well lighted. A public float is located on the north side of the Citizens Wharf, and accommodations for small craft will be found midway between the Public Dock and the Citizens Wharf. Visitors will find sev-



PETERSBURG



WRANGELL

eral stores equipped to supply them with all their boating needs.

There are several machine shops available for minor repairs to machinery. There are two marine ways. The larger is capable of hauling out vessels up to 100 feet in length. There is also a good gridiron on the north side of the oil wharves capable of accommodating boats up to 90 feet.

### **Juneau**

the capital and largest city in Southeastern Alaska, is situated on the northeasterly side of Gastineau Channel, 8 miles from Stephens Passage.

Small boats entering Juneau harbor proceed past the city to the bridge spanning the channel. The maximum vertical clearance is 45.7 feet for a width of 200 feet between the main piers. The small boat harbor is just beyond the bridge. The City of Juneau has made extensive improvements in its small boat harbor and it affords protection in any weather.

## **Caterpillar**

MARINE DIESELS  
38 to 400 h.p.

Sales, parts,  
completely equipped  
machine shop



In Ketchikan—

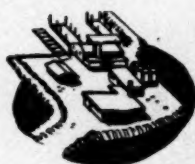
### **Northern Commercial Co.**

KETCHIKAN JUNEAU SEATTLE (NC Marine)

## **Caterpillar**

MARINE DIESELS

Sales, parts, machine  
shop, marine ways,  
steam cleaning, petro-  
leum products, fishing  
supplies.



In Juneau—

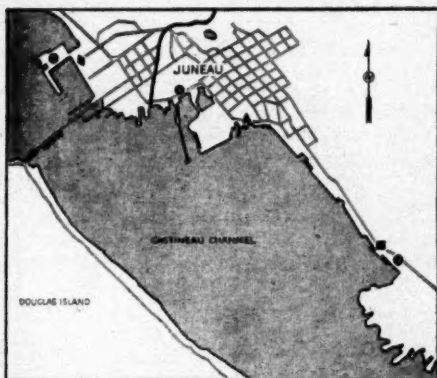
### **Northern Commercial Co.**

JUNEAU KETCHIKAN SEATTLE (NC Marine)



A regular bus service uptown is maintained, repair shops are close by, grocery and meat markets are in the vicinity. A telephone is on the main wharf and laundry and ice service may be obtained. Fresh water is available on the main float and arrangements may be made with the harbor master to obtain shore current. Two marine service stations are located in the city harbor, another just beyond the small boat harbor, where there is a complete machine shop, carpenter shop and drydock.

The Territorial Museum and Library is located in the Federal Building. Mendenhall Glacier may be reached by a 13 mile drive by car, Taku Glacier is 26 nautical miles from Juneau, easily accessible by boat. There are good trails on Mt. Juneau and Mt. Roberts, details of which may be obtained from the Regional Forester's office in the Federal Building. Juneau is located in the center of fine salt water fishing, and excellent fresh water trout lakes may be reached by short hikes or charter plane service.



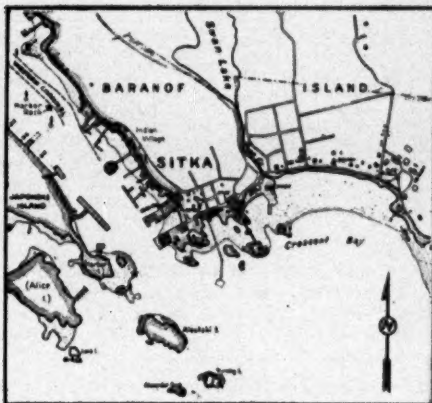
JUNEAU

### Sitka

one of Alaska's most important towns, is located on the eastern side of Sitka Sound. It is approached by the regular and well-marked steamer channel from the open ocean, with Kruzof Island to the west. Another entrance is by the steamer channel from Juneau on the inside passage through Sergius and the Whitestone Narrows.

Moorage for small boats is supplied without charge. Boats up to 65 feet dock at the city float with a small charge made for fresh water.

Several general stores supply provisions, fishermen's supplies and some ship



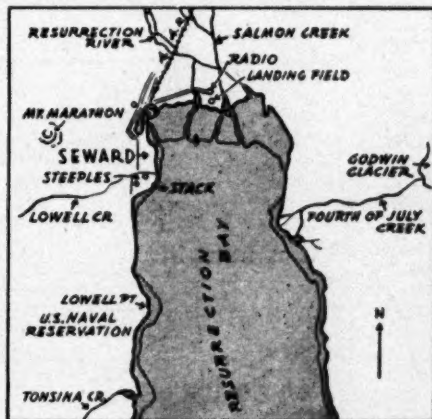
SITKA

chandlery. A number of government buildings, an Indian industrial school and home, a native village, sawmill, cold-storage plant, cannery and saltery are located here.

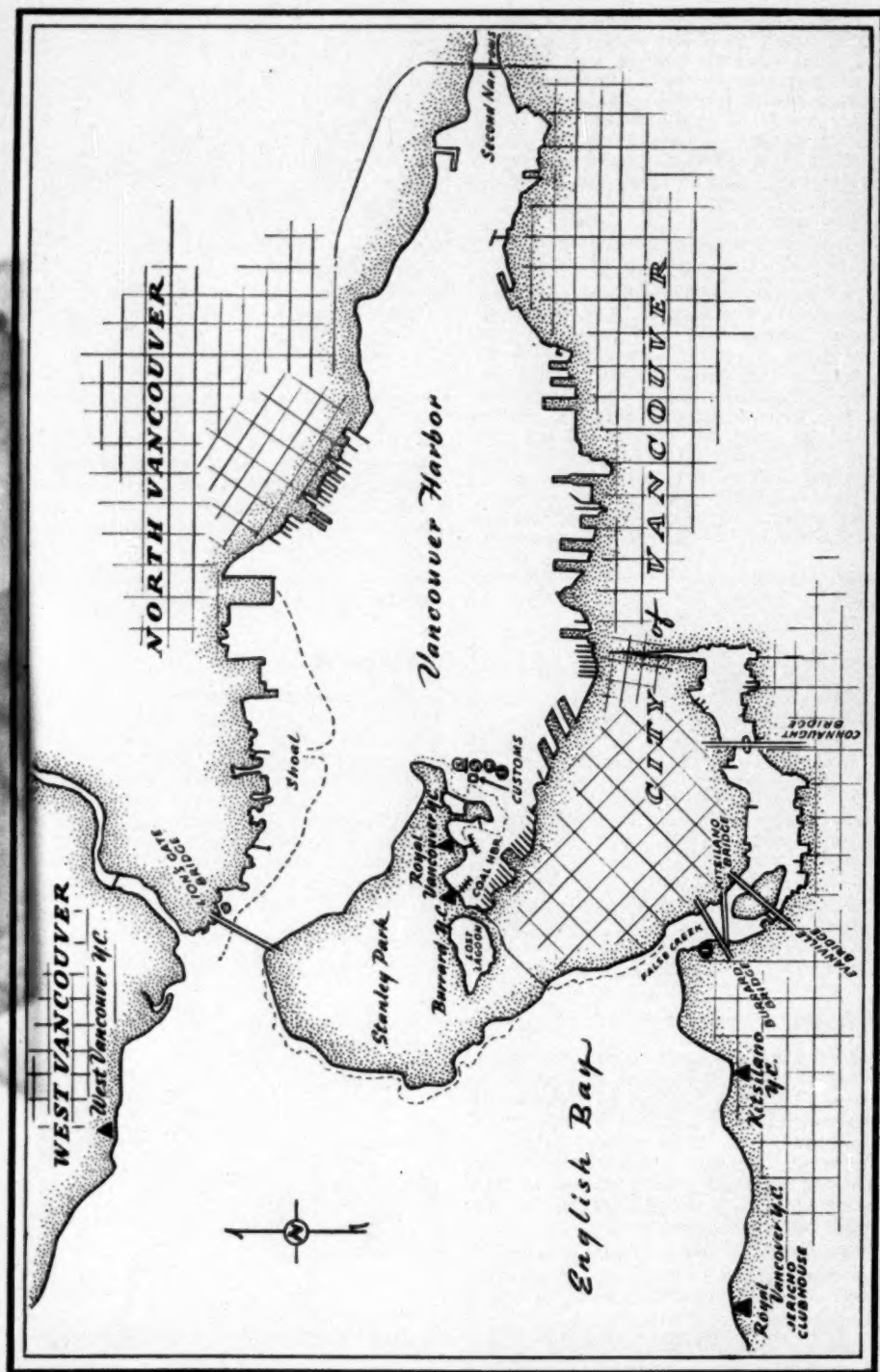
Marine railway and machine shop facilities are available for small craft.

### Seward

is the important rail-head city, located at the head of Resurrection Bay on Kenai Peninsula. It is the southern terminus of the Alaska Railroad and a vital steamship connection with the interior of Alaska. Seward has a small craft harbor and complete supply facilities such as fuel, food and equipment. Substantial improvements will be made to the small boat harbor this summer by the U. S. Army Engineers.



SEWARD



VANCOUVER, B. C. AND HARBOR AREAS

# BRITISH COLUMBIA

## *Harbors*

**S**AFE AND happy cruising through waterways of unexcelled grandeur, good fishing, convenient shore accommodations and a friendly atmosphere—these are British Columbia's offerings to the yachtsman and power boat sailor.

This season, as in many others in the past, thousands of pleasure craft will take advantage of this opportunity in Western Canada's marine vacationland, and facilities will be found better than ever, for British Columbia is fully conscious of the importance of this annual tide of seagoing travelers to and from her wonderful resorts along mile after mile of scenic loveliness from the northern reaches of Puget Sound to the Alaska boundary.

Those who delight in coastal cruising will find congenial people and surroundings wherever they wander in British Columbia waters because the province's economy is based largely on the industries of the waterfront—logging, fishing, towing and coastwise freight transportation. This fact in itself has been responsible in large measure for the existence of so many communities along the coast catering primarily to the needs of those who travel by sail and power craft.

Visitors from the United States are always welcome in British Columbia, and increasing numbers go there each year to share the unique attractions the pro-

vince offers. The international boundary line is probably more imaginary between Washington and British Columbia than anywhere else, and those crossing it by sea encounter a minimum of inconvenience in fulfilling the simple formalities of customs and immigration procedure.

For those interested in sailing and power boat competition, British Columbia has several interesting events taking place during the 1951 summer. First of them is the race from Victoria to Swiftsure Lightship and return May 30 to June 3, but of much wider appeal are the Pacific International Yachting Association events July 1 to 5 which will center largely in the British Columbia capital, and which will attract contestants and spectators from several western states.

Power boat enthusiasts will have a special concern in the International Cruiser Race July 28-29 starting in Coal Harbor, Vancouver, and ending in Seattle. Other contests lacking the international flavor but important in their own sphere are the "Royals Regatta" in English Bay at which the Royal Vancouver Yacht Club plays host to visiting groups from the Royal Victoria Yacht Club and Royal Toronto Yacht Club, July 30 to August 2, and the Cowichan regatta at Cowichan Bay, Vancouver Island, September 2, 3.

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## ***Vancouver, B. C.***

is situated on the south shore of English Bay and Burrard Inlet, bounded on the west by Point Grey and on the east by the Second Narrows Bridge. English Bay opens into the Strait of Georgia.

All vessels passing through Lions' Gate (First Narrows) should be well informed on the requirements of the Canadian Customs for entering. A new marine customs station will be anchored in Vancouver Harbor near the gasoline barges, beginning in June.

Moorages are available for all size yachts. The Royal Vancouver Yacht

Club and The Burrard Yacht Club welcome members of other clubs to make use of their facilities—so far as space permits. The Burrard Yacht Club moorings and clubhouse are at the entrance to Stanley Park in Coal Harbor. Floats are available to visiting yacht club members and if further stay is requested arrangements must be made with the caretaker. Coal Harbor and Burrard Yacht Club will be the rendezvous and starting point for the International Cruiser Race.

Vancouver's many beautiful hotels, parks, shopping district and other points of interest make it a year-round haven for visitors from all over the world.

Vancouver has been the heart of the boat building industry in Canada, and its progressive yards are offering top facilities for the building and repairing of commercial and pleasure craft.

The clubhouse and moorings of the Kitsilano Yacht Club are located at Kitsilano Beach, in the southeast section of English Bay, Vancouver, B. C. There are no guest moorings but there is a good bottom for anchoring. For small open boats there is a hoist capable of two tons and ample storage facilities on the club dock.

### **New Westminster, B. C.**

has excellent facilities for wharfage and anchorage. It is situated on the north or right bank of the Fraser River, in a general easterly direction—seventeen miles from the entrance. For easy entry boats sail up the mouth of the Fraser River to the south of Lulu Island, lying to the east of the Strait of Georgia.

Supplies of all descriptions are easily obtained. Oil, gas, ice and fresh water, provisions and small boat repairs can be effected. New Westminster is the most important town on the Fraser River and it is the center of southern British Columbia gillnetting, hence it is of particular importance to commercial fishermen. Canneries and public cold storages are located along the waterfront.

### **Victoria, B. C.**

is the provincial capital of British Columbia. It is surrounded by the waters of the Strait of Juan de Fuca and the Strait of Georgia, with the San Juan Islands lying to the east.

The harbor, lying two miles east-southeastward of Esquimalt, has its entrance between Macaulay Point and the breakwater extending from Ogden Point.

Special attention should be paid to tides, currents and winds in approaching Victoria Harbor as they are variable.

Pleasure boats visiting Victoria have three main anchorages, the Royal Victoria Yacht Club at Cadboro Bay, the yacht basin in front of the Empress Hotel and Constance Cove, Esquimalt Harbor. There are many commercial wharves in the outer, inner and upper harbors of the city. The fishermen's wharf provides two-thirds of a mile of berthing space and will accommodate an estimated 100 vessels.

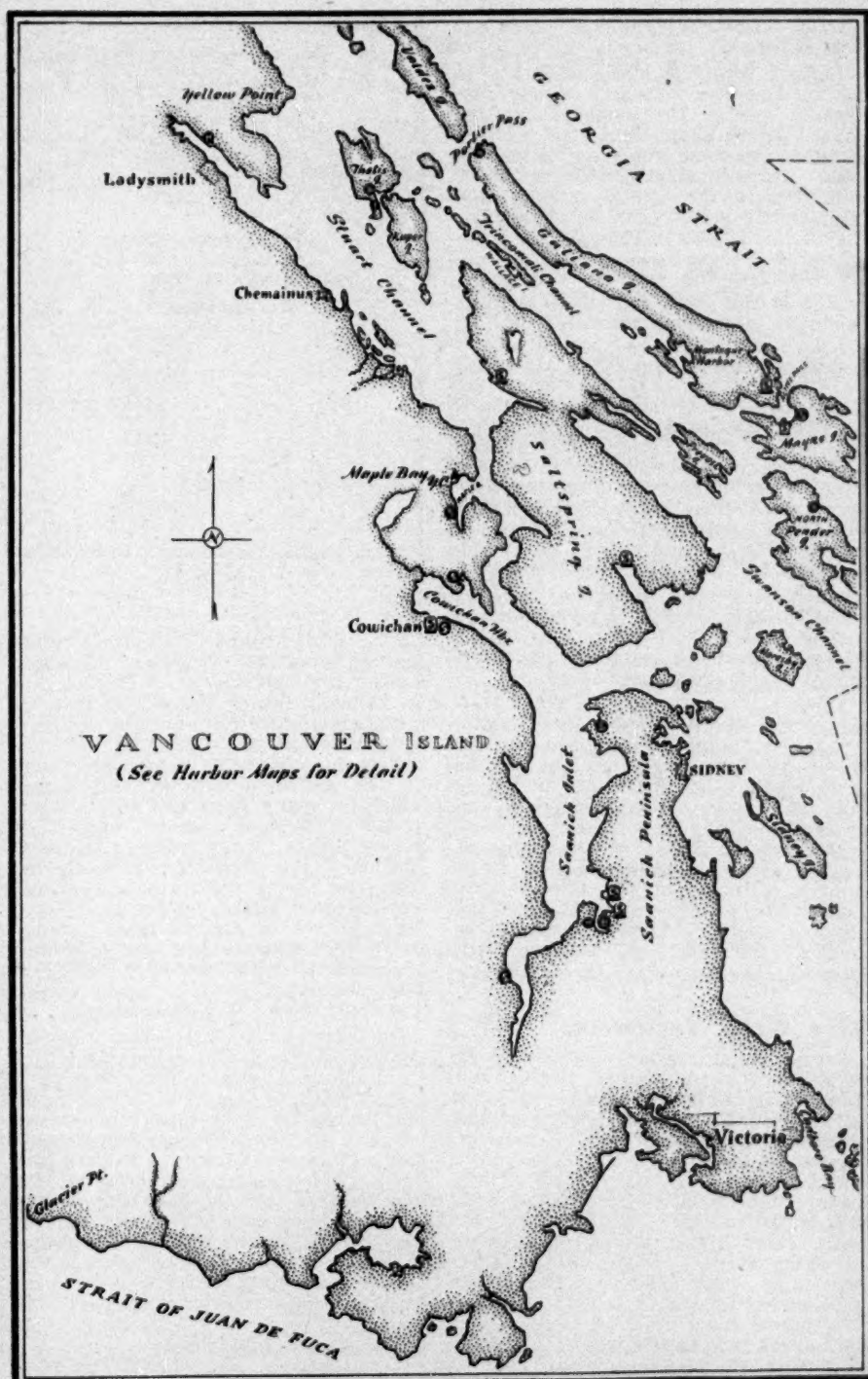
Supplies of all kinds including ship chandlery and engineering needs are obtainable. Fresh water is piped to all the wharves in the city. Ship's refuse is collected free by the city and taken away in ash scows. Gasoline, oil, provisions and ship stores are available in abundance. A public cold storage plant supplies ice and fishermen's bait.

Victoria has been greatly developed in the last several years as a commercial



VICTORIA





VANCOUVER ISLAND (Victoria to Ladysmith)

boating center. Several boat yards are located here.

Cadboro Bay is a pleasant harbor on the northeastern outskirts of the city. Here is located the clubhouse of the Royal Victoria Yacht Club, good mooring facilities, and some wharfage for visiting boats. Through arrangements with the club steward, provisions, laundry and dry cleaning service can be obtained.

### **Sidney. B. C.**

located at the north end of the Saanich Peninsula is perhaps the most used of all ports of entry by United States yachtsmen. Wharf and floats are all at the foot of Beacon Ave., and floats are behind sheet piling on the north side of the small boat wharf. Customs House, government liquor store, and general supplies may be obtained in this town. Large scale charts of this locality may be obtained there by courtesy of the Canadian Customs Officers. Yachts are warned that it is not safe to lie at Sidney Wharf in bad S.E. or N.E. winds.

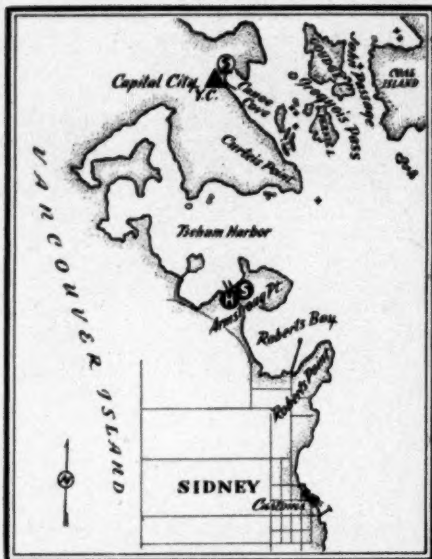
North of Sidney, about one mile, is Shoal Harbor, with oil, gas, water and general store and general repairs. Radio, phone and depth-sounding services available at two well-equipped marinas.

About half a mile north of Shoal Harbor is Canoe Cove where the Capital City Yacht Club have their headquarters. The Canoe Cove Shipyards Ltd., is one of the oldest yards in this district where gas, oil, water, ice and general and frozen stores may be obtained, also complete repair facilities with three slips to handle yachts up to 60 feet. A large number of boats of the Capital City Yacht Club are moored at Canoe Cove where a visitors wharf is available to visiting yachtsmen, and showers, with hot water, are supplied at the club house.

### **The Gulf Islands:**

Before the yachtsman, cruising north from Victoria or Puget Sound, approaches Sidney he will have encountered the first of the myriad islands of the Georgian Archipelago lying between Vancouver Island and the British Columbia mainland. Actually, these islands are an extension of the chain whose first links in the south are in U. S. territory—San Juan, Lopez, Orcas, Shaw, and the string of smaller islets surrounding them—and which continues northward to Discovery Passage and Seymour Narrows where the Straits of Georgia are pinched off to a narrow channel leading northward into Johnstone Strait.

The San Juan group is separated from



**SIDNEY**

its Canadian neighbors by Haro Strait through which the imaginary line establishing the boundaries of Canada and the United States passes. Along the strait's westward flank, at the approach to Sidney, lie the Canadian islands—**Sidney**, famous for its Sidney Spit, home of the elusive goeyduck, and **James**, which for many years has been the site of one of Western Canada's biggest explosive plants. A few miles to the north of Sidney, just across a narrow channel from the tip of the Saanich peninsula on Vancouver Island lies one of the largest members of the Georgian group—**Salt Spring Island**, which guards the approach to **Saanich Inlet** and **Brentwood Bay**, celebrated for their many resorts and their Spring and Coho salmon.

The stretch of water separating the Saanich peninsula and Salt Spring is **Satellite Channel**, and a ferry service is maintained for those desiring public conveyance as their means of contact between the two land areas from **Swartz Bay** on Vancouver Island to **Fulford Harbor** on Salt Spring I. Salt Spring is hilly and wooded, but it has been settled since the early days of British Columbia, many farm families having been located there for generations. The result is that the island is well served by roads and facilities convenient to travelers.

**Vesuvius Bay**, on the northeastern shore of Salt Spring Island, has the only boat landing in this area. Beside the government wharf is a private wharf,

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where gasoline and water are available. A lodge, coffee shop and store are nearby.

Off to the east of Saltspring are **Pender** and **Saturna** islands, both possessing attractions for the yachtsman and power boat man eager for idyllic comfort as he wanders through the sheltered sea.

This year the Pacific International Yachting Association Regatta will start with a rendezvous at **Bedwell Harbor**, lying between the southern extremities of **South Pender** and **North Pender** Islands. At **South Pender**, on **South Pender** Island, there is a government wharf and float, a marine gas station, and a general store. This is a sheltered harbor with a large safe anchorage area.

On the northeast shore of **North Pender** Island there is a landing at **Hope Bay**, where gasoline and diesel oil products are available. A general store is nearby.

**Pender** and its northern neighbors, **Mayne** and **Galiano**, are close to the main deepsea shipping routes between **Victoria** and **Vancouver**, and nearly all coastwise vessels pass through the curving **Active Pass** separating **Galiano** from **Mayne**.

The northwest shore of **Saturna** Island is deeply indented by **Lyall harbor**, where a wharf, gas pump and general store is available to serve boats.

**Galiano** is a long, narrow island trending northwesterly. **Trincomali Channel** separates this island from **Saltspring**. As on scores of other islands in the archipelago, **Galiano** offers countless opportunities for sea sport and interesting forays from beach to timbered hills and friendly fields, ideal for picnicking, or impromptu overnight visits.

In **Sturdles Bay**, **Galiano** Island, located in the vicinity of **Active Pass**, is a government pier and a private dock which has long been a favorite stopping place for cruising yachtsmen. Although the **Galiano Lodge** was destroyed by fire this spring, the owners will maintain complete services for boats, including water and a full line of petroleum products. Meals can be obtained nearby. Tours of the island and transportation to a golf course are still available.

Many of the islands visited in the **Georgian Archipelago** have been only lightly touched since their first glimpse by the white men—by the Spanish explorers who gave their names to them—**Galiano**, **Valdez**, **Gabriola** and so on. Their outward appearance is the same as it was over a century ago when the **Haida** Indians in their huge war canoes sailed and paddled all the way from the

**Queen Charlottes** to battle with the **Cowichan** and other tribes. Chief outpost of Indians in this area now is **Kuper Island**, lying to the west of **Galiano**, but there are numerous Indian reservations along the coast.

A dredged channel, crossed by a fixed bridge, separates **Kuper** and **Thetis** Islands. In **Telegraph Harbor** is a wharf and a store where petroleum products and all provisions except fresh meat are available. The wharf is located on the southeast shore of **Thetis** Island, north of **Foster Point**.

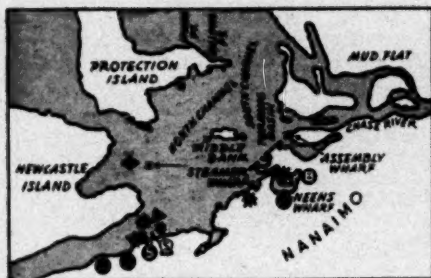
**Wallace** Island is located in the **Trincomali Channel** between **Saltspring** and **Galiano** islands. At a harbor, locally known as **Conover Cove**, on the southwest shore, is a boat landing, a general store where gas, oil, and water can be obtained in an emergency.

Northward from **Galiano** is **Valdez** Island, separated by **Porlier Pass**, and then **Gabriola** Island. Although **Silva Bay** on **Gabriola** Island is considered a difficult entrance to make for the first time, it is a popular stopping place for yachtsmen and complete facilities have been installed to serve visiting boats. A detailed Canadian chart shows the bay, which is surrounded by the **Flat Top** Islands on the **Gulf** side of **Gabriola Pass**. Facilities include two marine service stations, wharfs, floats, adequate store facilities for groceries, hardware, fishing supplies, a cafe, and a shipyard and machine shop.

North of **Gabriola** there is a break in the island chain and a stretch of open water until **Lasqueti** and **Texada** islands are encountered, these two units being separated by **Sabine Channel**. **Texada** geologically and economically is one of the most important of the **Georgian Islands** because it has extensive copper, iron and limestone deposits. **Gillies Bay**, on the western shore of **Texada**, and **Blubber Bay**, at the north, just across from the prosperous newsprint community of **Powell River**, are the largest settlements on the island.

Cruising westward again, the sailor reaches **Hornby** and **Denman** Islands, across **Stevens Pass** and hugging the shore line of **Vancouver Island**, just a few minutes' cruising from the **Island Highway** where it passes **Bowser**, **Fanny Bay** and **Buckley Bay** on the way to **Cumberland** and **Courtenay**. **Hornby** Island has several small resorts and passenger ferry service to **Buckley Bay**. **Denman** also has much to offer the camper who delights in rustic surroundings.





NANAIMO

### **Maple Bay, B. C.**

on Vancouver Island is a bay and a village on Sansum Narrows, between Sidney and Nanaimo. The Maple Bay Yacht Club maintains floats and other facilities which are available to visiting yachtsmen. Water, gas and oil are available, as well as boat repairs near the town of Duncan by highway.

Birds Eye Cove is a sheltered inlet off Maple Bay, six miles north of Cowichan Bay on Vancouver Island, where a full line of petroleum products are available. Facilities include a wharf, 900 feet of floats for which a small charge is made for mooring, marine ways up to 45 feet, a fully-equipped repair shop, store, ship chandlery, good spring water, shower baths, and a small self-service laundry.

### **Cowichan Bay, B. C.**

is a deep indentation on the eastern shore of Vancouver Island a few miles north of Sidney. At the village is a government wharf with gasoline and diesel oil pumps. Marine repairs, services, boat building and repairing are available. Genoa Bay is located within Cowichan Bay, approximately one mile northwest of Separation Point which is at the southern end of Sansum Narrows or approximately three miles northwest of Cape Kepple at the southern end of Satellite Channel. Services here include gas, oil, water, wharfage, store, meals, etc., and a lodge is nearby.

### **Ladysmith, B. C.**

in Ladysmith Harbor on Vancouver Island offers a protected anchorage, delightful water for swimming. Groceries and supplies can be obtained. On the opposite shore from the town is a float and boat landing where gasoline, fresh water, ice, and provisions are obtainable.

### **Nanaimo, B. C.**

is situated on Vancouver Island, 73 miles N. E. of Victoria with Vancouver almost opposite across the Georgian Straits—a distance of 33 miles. The harbor is approached from the north and east between the western end of Gabriola Island, and Vancouver Island west of it, a distance of 3 miles. There are three channels between the dangers in the approach. The approach from the southward is through Dodd Narrows and Northumberland Channel, the latter being free from all dangers. No breakwaters or bridges are in this area.

Public moorings can be found at the yacht club premises and Farmer's Landing, between the Canadian Pacific R.R. and Hearst Wharves. Pleasure yachts are not liable to harbor dues.

The Nanaimo Yacht Club is at Exit Passage—between Newcastle Island and the mainshore. The clubhouse is at the street end of Rosehill Street connected with the moorings by a ramp. Full facilities are available for visiting yacht club members. The Government float is used as a public landing.

Nanaimo has long been a mecca for yachtsmen and a convenient stopping point for extensive cruising northward.

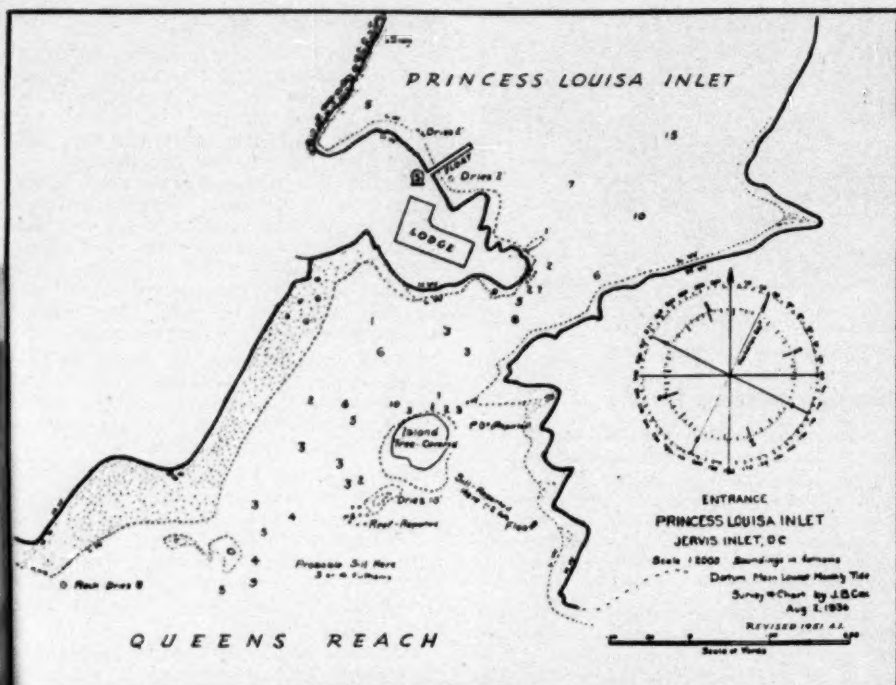
### **Georgia Strait:**

#### **Vancouver to Johnstone Strait**

Secret Cove is a popular yachting center and because it is only 45 miles from Vancouver offers special attractions to people from that city on a week end cruise. It offers a wide range of supplies, including gasoline and fresh water.

#### **Pender Harbor, B. C.**

10 miles north of Thormanby Island, is on the mainland 48 miles north of Vancouver, and shown on the maps as Irving's Landing. It is just inside the harbor entrance. The safest entrance is the northernmost channel, keeping the light beacon to starboard. There are numerous anchorages in the many bays and channels of the Harbor. Dance's Landing, inside the entrance to Pender Harbor on the south side, has mooring facilities. Large yachts often anchor off the western point of Garden Bay Peninsula, which is a favorite rendezvous for yachtsmen.



## PRINCESS LOUISA INLET

Egmont, located at the entrance to Jervis Inlet, is near the Skookumchuck Narrows, famous for salmon fishing as well as for its scenic grandeur. There is a small community here with a store operated by the Egmont consumers' co-operative and facilities for water, gas, diesel fuel and storage supplies. As it is a long run to the head of Jervis Inlet at Princess Louisa Inlet and the Malibu resort, most people cruising to that area make sure they are adequately supplied at Egmont.

### Princess Louisa Inlet

Princess Louisa Inlet is a short off-shoot of Jervis Inlet, approximately 100 miles north of Vancouver, B. C. The inlet is near the head of Jervis Inlet and has an entrance with peculiar conditions to reckon with. The inlet's entrance is so inconspicuous that it can easily be passed by unnoticed. The shore to the east of the entrance (near side), slopes up steeply at an angle of 30 degrees or so (60% slope), and contrasts with the precipitous cliffs behind it and to the

west of the entrance, to make a good landmark for the approach.

An islet lies in the entrance. Although small boats may pass to the east of the island it is advisable for the visiting yachtsman to enter the inlet through the main channel on the northwest side where the water is deep and free from reefs.

On one's first entrance into the inlet it is advisable to wait for high or low water slack. In checking the tide in Jervis or Princess Louisa Inlets use the Sand Heads tide tables. Officially, high and low slack occurs 20 minutes after the time given in the Sand Heads table but one-half an hour before or after that time will assure an easy entrance. Yachtsmen who are familiar with the entrance may enter or leave with safety on the short tides, i.e., from three to nine-foot tides.

Located just inside the entrance on the western shore is the Malibu Club where supplies, groceries, fresh fruit and vegetables, frozen foods, fuel and oil, water and radiotelephone service are available to yachtsmen. Luxury accommodations ashore are offered.

Between the entrance and the head of the inlet, a distance of five statute miles, there is only one reef, a patch of rock 150 feet off the easterly point of the island half way up the inlet.

Good anchorages in quiet water may be found anywhere along the shores of the cove to the north of the island half way up the inlet. At the head of the inlet the best anchorage is just off the falls.

**Gorge Harbor** on the west side of Cortes Island is scenically interesting, but **Manson Landing**, nearby, offers stores, water and gas facilities.

**Blind Creek** is another Cortes Island point of interest to yachtsmen and power boat men who have become attracted to the charms of the Cortes Island region. This community is on the south side of the island, offers good shelter, supplies and gas.

**Refuge Cove**, on Redonda Island, across the channel from **Squirrel Cove**, accommodates the traveler with stores and power boat fuel and merchandise. The latter point is an old Indian village and is particularly interesting for that reason. The entire area is highly scenic.

Both Bute and Toba Inlets, in the adjacent area, are favored cruising grounds, although supplies are not available there and the provident traveler will have made his arrangements at **Refuge Cove** or **Squirrel Cove** or **Stuart Island**, which has a wide selection of supplies, gas and diesel fuel, water, etc.

**Stuart Island** has a daily plane service and telegraph communications and is a last supply stop for scenic cruises up 45-mile Bute inlet. Boats tie up at the **Stuart Island** float while waiting a change of tide in **Yuculta Rapids**.

**Owen Bay** on Sonora Island commands the entrance to **Okisollo Channel**, where the tides are tricky but well worth mastery as the waterway leads to a land of enchanting scenery. Stores and fuel are available.

**Quathiaski Cove**, on **Quadra Island**, is a commercial fishing center. This is a stopping place for boats waiting for **Seymour Narrows**.

**Campbell River** itself, at the mouth of famous trout stream, offers limited facilities to the visitor. The famous **Tyee Club** for sport fishermen is located at the end of the spit running out from the river mouth's south shore.

**April Point**, on **Quadra Island**, is recognized as the yachtsman's headquar-

ters for Tyee fishing off the **Campbell River**, and its commodious mooring facilities and holiday atmosphere have made it one of the coast's favorite resorts. A marine oil station is here, and the **Queen Charlotte Air Lines** provide service to this point.

Because the tide runs fast through **Seymour Narrows**, it is sometimes regarded as a hazardous stretch of water. Actually, there is little or no risk if the yachtsman tackles the narrows at slack tide and watches his current tables, which in this instance are even more important than the tide times.

While waiting for the tide to change in **Seymour Narrows**, **Brown's Bay** is a good spot to stay when southbound. The location is about three miles north of the Narrows and its store is well stocked with goods usually needed by cruising parties. **Heriot Bay**, on the east side of **Quadra Island**, has a store and limited facilities for supplying boat fuel. Similarly, **Rock Bay** has no regular offering of supplies, although it is a site of busy logging operations.

## **No. Vancouver Island:**

### ***Johnstone Strait to Queen Charlotte Sound***

**Shoal Bay**, on **Thurlow Island**, makes a good base for those planning to cruise up **Phillips Arm**. The objective of such a side trip is usually the excellent trout fishing on **Phillips River**. **Shoal Bay** can meet boats' requirements for gas, oil and similar supplies.

**Kelsey Bay**, on **Johnstone Strait** near the mouth of the **Salmon River**, commands the approach to the fertile **Sayward valley** on **Vancouver Island** and as it is also the operating base for a large logging company it stocks a good supply of gasoline, diesel fuel and general stores and fresh water. There is a post office and government telegraph station here.

**Port Neville** is a small settlement offering a good shelter, and there is a store there where gas and merchandise may be obtained.

**Minstrel Island**, at the mouth of **Knight Inlet**, affords the yachtsman and power boat man his last opportunity to obtain supplies prior to cruising up the fjord-like inlet. He will be able to satisfy



VANCOUVER ISLAND (Nanaimo to Thurlow Islands)



most of his requirements here, if they are not too ambitious.

**Baronet Pass** on Chacroft I., where a small sawmill and boatbuilding yard are located, near Walden Island, also has a gas station for the convenience of cruise parties.

**Englewood and Beaver Cove** are logging communities for two of the larger British Columbia companies and general supplies are therefore available, although the communities do not make a point of catering to pleasure travel. **Telegraph Cove**, on the south shore of the entrance to these places, offers supplies, gas, etc.

**Alert Bay** is the largest and one of the most interesting of all the settlements in the region, with a population of about 2,000. Police, forestry, fisheries and other government departments have their local bases here. The place is noted for its picturesque Indian village with its totems. An Indian residential school is in the town. A wide range of supplies is offered by the stores. Hotel accommodation is also available. There are ample supplies of fresh water, gasoline and diesel fuel, etc.

**Malcolm Island and Sointula** also offer a charm of their own, for here is an industrious Finnish settlement colonized by a group of immigrants who came to the Pacific coast two generations ago and whose main livelihood now is agriculture and fishing, which are carried on co-operatively.

**Port Hardy**, while a settled community for a good many years and the location of one of the British Columbia coast's more important air bases, offers limited marine service. However, it is the base of a large logging company and the road to **Coal Harbor** whaling station starts here, so it is possible to obtain accommodation in an emergency.

**Bull Harbor** is the farthest north spot on Vancouver Island that anyone but the most adventurous small boat navigator will want to visit. It is a sheltered cove on Hope Island. There is a government wireless station here. Supplies may be obtained from the fishing settlement during the summer.

**Cascade Harbor**, on nearby **Nigel Island**, is another fishing center offering access to supplies in summertime.

**Allison Harbor**, at the mouth of **Seymour Inlet**, and **Sullivan Bay** in **Wells Passage**, offer a pretty general selection of supplies to cruise parties.

**Simoon Sound** is the supply center for the **Kingcome Inlet** area, and good stocks are available here for travelers. The location is on **Gilford Island** in **Cramer Pass**—a scenically memorable part of the coast, ideal for cruising, and with a fine reputation for fishing.

## Vancouver Island:

### West Coast

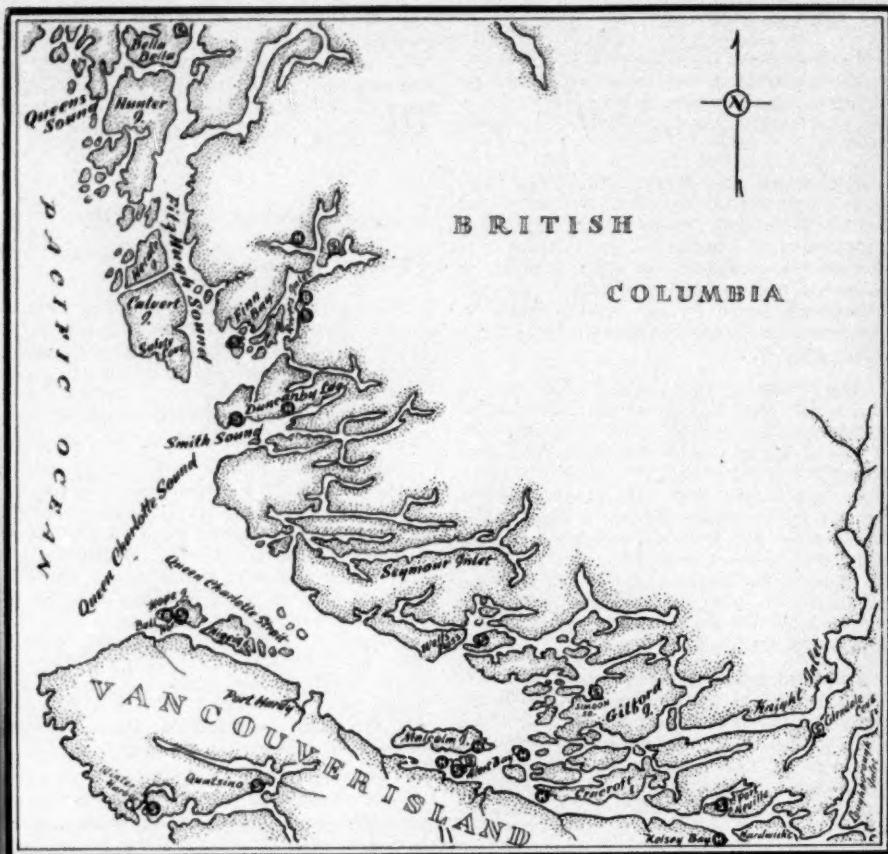
On the west coast of Vancouver Island beginning at the northern tip, the first point of call for small craft is usually **Winter Harbor**, at the entrance to **Quatsino Sound**. This is a fairly busy fishing center and it offers all the supplies, fuel, etc., ordinarily required.

Heading southward in **Kyuquot Sound** is the village of **Kyuquot**, on **Mission Island**, affording good protection for small craft and ample supplies. This has been a fishing community for years. Excellent shelter is also provided at **Queen's Cove** at the entrance to **Esperanza Inlet**. For the wanderer, there are several communities farther up the inlet—places such as **Zeballos**, one of British Columbia's most active gold camps a few years ago; **Ceepeecee**, site of a fish reduction plant, and **Tahsis**, where a large tidewater sawmill is located.

This section of the west coast of Vancouver Island is rich in history, for it was here that **Captain John Meares** used to trade with the Indians for furs which he carried across the Pacific to China. Here was the domain of the famed chief **Maquinna** and it was at this point that British and Spanish ships almost went to war. **Friendly Cove** and **Nootka** were the center of industry in the long ago as bases of the fur trade. They are still inhabited by Indians, and fishing is active. Plenty of space for shelter in the bays here, and stores, gas, oil are available.

All supplies for cruising purposes are to be had, too, at **Hot Springs Cove**, a few miles away, and at **Tofino** in **Clayoquot Sound** near the northern extremity of a spur of land reaching upward from the multi-mile-long strip of sand at **Long Beach**.

**Ucluelet** is an important fishing and logging center at the entrance to **Barkley Sound**. From here there is a long, well-protected arm of the sea reaching by way of **Alberni Canal** to **Port Alberni**, one of Vancouver Island's major industrial centers, with pulp and lumber mills and a thriving fishery. **Port Al-**



BRITISH COLUMBIA (Kelsey Bay to Bella Bella)

berni is on the main highway through Victoria, Nanaimo and east coast cities.

Near the entrance to Alberni Canal, on Uchucklesit Inlet, is the cannery community of Kildonan. Franklin River and Sarita are logging communities along the canal. Near the southern entrance to Barkley Sound in a well-protected bay is Banfield, where the Pacific cable station is located and all supplies are available. From that point and around Cape Beale there is a long stretch of open water, often rough, to Sooke, although there are settlements at Clooose, Port Renfrew and Jordan River, the latter two being principally noted for logging. Their accommodation for pleasure craft is strictly limited. Sooke, on the other hand, has all needed facilities and direct road connection with Victoria, about 20 miles away.

## B. C. Coast:

### *Smith Sound to Bella Bella*

From Vancouver Island north through Queen Charlotte Sound there is a stretch of open water that can, at times, test the most skillful of navigators, but protected stretches are not far distant, and there are several fishing and cannery centers in the Rivers Inlet district. This is one of British Columbia's great commercial salmon centers.

The Rivers Inlet district, while primarily important for its commercial fisheries, is a favored cruising objective of yachtsmen, who usually make their

base at **Dawson's Landing** or **Duncanby Landing**, both of which have a full range of supplies available.

**Safety Cove** provides shelter, but its stock of supplies is not a varied one.

For the tourist **Bella Bella** offers more attraction than most of the other places in this section as it has been an Indian settlement for many years and noted for its Indian architecture and totems. The same general description applies to **Bella Coola**, at the head of Dean Channel, which commands access to beautiful Tweedsmuir Park, a national reserve, and the overland trail first blazed by Alexander Mackenzie, the explorer.

Just north of the area shown on the accompanying map is **Ocean Falls**, situated on Cousins Inlet off the junction of Fisher and Dean Channels. Here is located the Ocean Falls Yacht Club, at the starboard hand as the end of the inlet is approached. Petroleum products, and fresh water are available. A general store is operated by Pacific Mills, Ltd. Radio, telephone and telegraph stations handle communications to outside points. The Yacht Club marine shop and the company marine shop can provide drydocking and repairs.

### **Prince Rupert, B. C.**

is situated on Kaien Island at the southern side of Prince Rupert Harbor, about 50 miles from the Alaskan border. It is

25 miles from Port Simpson and 550 miles from Vancouver, B. C. The entrance is through Chatham Sound and Prince Rupert Harbor, between Lima Point of Digby Island and Kaien Island, nearly five miles northward of Kitson Island in the approach. All approaches to the harbor are deep and navigable for



**PRINCE RUPERT**

the largest vessels at all times. In the central part of Prince Rupert Harbor the depths vary from 20 to 33 fathoms and in the fairway northwest of the settlement from 20 to 22 fathoms.

There are a number of docks where both pleasure and work boats can tie up. Wharves for larger vessels fronting the city are of considerable extent, with deep water alongside. Prince Rupert is one of the most important commercial fishery centers in the Northwest.

Boat and engine repairs are available.



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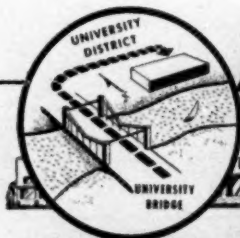
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# WASHINGTON

## Harbors

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The Columbia, the West's greatest river, forms the southern boundary of Washington and provides a navigable waterway for small craft to the eastern section of the state. The western shore of the state is deeply indented by two large harbors, Willapa Bay and Grays Harbor.

The Northwest boundary is formed by the Strait of Juan de Fuca from which numerous bays and inlets penetrate deep into the interior of Western Washington. These inland salt waterways, including Puget Sound and Hood Canal, offer extensive cruising grounds with thousands of miles of shoreline and some of the best sailing waters in the country. The climate is mild and comfortable in Western Washington and yacht clubs schedule events for every month in the year.

An increasing number of restricted areas are being placed in popular cruising waters. Because of the existing dangers during military target practice, mariners should familiarize themselves with regulations and keep their charts up to date. Navigation regulations can be obtained from the Corps of Engineers, U.S. Army, 4735 E. Marginal Way, Seattle 4, Washington, and from the U.S. Coast Guard.

Areas in which entry of privately-operated vessels is prohibited because of military operations, including bombing and torpedo practice, are (1) an area off the Northwest shores of Whidbey Island extending to the Minor Island light. (2) Waters in the vicinity of Oak Harbor and Crescent Harbor on the east

side of Whidbey Island. (3) The seaplane landing area in the vicinity of Sand Point, Lake Washington. (4) Sinclair Inlet (for vessels of more than 100 gross tons). (5) Smith Cove, Elliott Bay. (6) Certain waters of Port Orchard in the vicinity of Keyport. (7) Waters in the vicinity of Bangor, Hood Canal and Dabob Bay. (8) An area in the vicinity of Hein Bank and Eastern Bank in the Strait of Juan de Fuca. (9) An area in Budd Inlet surrounding the anchorage of the reserve fleet.

Areas where anchoring or trawling is prohibited include the northern half of Admiralty Inlet and an area near Jefferson Head.

Anchorage which are prohibited to small craft include the Freshwater Bay emergency explosives anchorage, the Kingston explosives anchorage, Thorndike Bay emergency explosives anchorage on Hood Canal, Blake Island explosives anchorage, the Port Townsend explosives anchorage. Ships at anchor in these areas should be given a wide berth.

General anchorage and berthing areas have been established at Kilisnoe Harbor, Holmes Harbor, Port Gardner, certain areas near Smith Cove and Harbor Island in Seattle harbor, and Orchard Point. Regulations are vague concerning the use of these areas by small craft, but generally, necessary navigation through these waters is permitted.

In addition, certain areas are utilized intermittently for naval target practice. These include danger areas in the vicinity of Waldron Island, Rosario Strait, Smith Island, Saratoga Passage, Sea Lion Rock at Queets, Willapa Bay, Admiralty Inlet, and the Washington Coastal warning areas. At present these are not shown on the charts and are used without notice.

## Seattle:

Within Seattle's city limits are 193 miles of shoreline. Salt water harbors include Elliott Bay, East and West Waterways, Smith Cove, and Shilshole Bay.

Most small boats enter the government locks at Ballard to fresh water, a series of canals and lakes which includes Salmon Bay, Lake Union, Portage Bay, and Lake Washington. Here are found small boat landings, covered moorings, well-equipped marine stores, boat and

engine distributors, yacht clubs, marine ways, boatbuilders.

Seattle is the center of the big Washington boat population. The Corinthian Yacht Club has moorings at the new sailboat center at the Leschi dock, Lake Washington. The Corinthian and Seattle Yacht Clubs are sponsoring an active sailing program here.

Queen City Yacht Club is located on the southwest shore of Portage Bay. Temporary moorage is available to boats

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Seattle Yacht Club is located near the entrance to Montlake Canal on Portage Bay. All members of recognized yacht clubs are welcome to use their facilities. Visiting membership privileges are accorded all members of recognized clubs for three months, during which time moorage is obtainable at customary rates.

Other yacht clubs in the Seattle area include the Tyee Yacht Club, the Rainier Yacht Club, and, on the eastern shore of Lake Washington, the Meydenbauer Bay Yacht Club.

Small craft and storm warnings are flown from the top of the Exchange building, First and Marion Streets in downtown Seattle; at the Seattle Yacht Club; and at the east end of the center guide pier of the government locks at Ballard.

#### Government Locks

The Government locks at Ballard, gateway to Seattle's fresh waterways, are entered from Puget Sound through Shilshole Bay.

Red and green signal lights are established on the guide pier below the Great Northern Railway bridge below the locks. Green indicates that waiting vessels must proceed immediately into the large lock, and that the lock is empty of all traffic, and vessels leaving the lock have either passed through the Great Northern Railway bridge below the lock or have entirely cleared the lock at the upper end. If the red light is burning, vessels for the large lock must moor at the pier.

Vessels bound for the small lock shall obtain instructions from the pierman on the end of the pier as to which lock to use and shall be guided into the small lock by traffic signals thereon.

Vessels bound for the large lock, going east, and vessels leaving the small lock, going west, when meeting in the vicinity of the Great Northern Railway bridge must pass to the left. If in doubt sound the whistle or horn to avoid accidents.

To avoid damage to other vessels and to property along the shores, all vessels are asked to proceed at reduced speed in the canal. Speed limits are posted.

**Bridges and locks in order from Shilshole Bay into Lake Washington:**

**Great Northern Railroad bridge** at West entrance to the locks: Clearance is 43 feet at ordinary high water. Whistle signal to open is one long blast and one short blast (— —).

**Ballard Locks:** Approaching the locks from either direction prepare bow and stern lines at least 50 feet long, and have bumpers ready for use on both sides. A lock slip, obtainable from the lockmen, should be filled out and ready before entering the locks. Prepare to lay alongside where the sign says "STOP HERE" until given instructions to proceed either to the large or small lock. A boat entering the locks should proceed with caution at a reduced speed so that it can be stopped by snubbing its mooring lines. On entering the locks from Shilshole Bay, the salt water side, the attendant will lower a light line so you may attach your line and he can haul it up. The attendant will make your lines fast on shore, leaving you the responsibility of preventing damage to your boat or others in the locks as the water swirls while rising or falling. Be sure to take up slack on your lines, or pay out gradually, to prevent your boat from lurching out of control. Two floating mooring bitts have been installed on the south side of the small locks for emergency use. Whistle signals are two long, two short (— — — —). If with tow, two long and three short (— — — — —).

Extreme caution should be taken to avoid the spillway area at the south of the small locks because of dangerous currents and whirlpools.

**Ballard Bridge:** Between Salmon Bay, to the West, and a canal to the East. Clearance is 29 feet; 43 feet midchannel. Whistle: — —.

**Northern Pacific Railroad Bridge:** Crosses the canal. Clearance is 15 feet. Whistle: — — — —.

**Fremont Bridge:** Between the canal to the West and Lake Union on the East. Clearance is 30 feet. Whistle: — —.

**George Washington Memorial Bridge (Aurora Bridge):** A fixed bridge almost above the Fremont Bridge. Minimum clearance is 135 feet over channel.

**University Bridge:** Between Lake Union and Portage Bay. Clearance is 29 feet; 43 feet in mid-channel. Whistle: — — — —.

**Montlake Bridge:** Spans the canal between Portage Bay to the west and Union Bay of Lake Washington to the east. Clearance is 30 feet; 44 feet in mid-channel. Whistle: — —.

**Lake Washington Floating Bridge:** Floating pontoon bridge on Lake Washington connecting Mercer Island with Seattle. Smaller craft can pass under approach spans at each end of floating





sections, which have a minimum clearance of 29 feet with 9 feet additional at the shore ends. Large vessels gain access to the south end of lake through the draw span of the floating bridge. Advance notice of 30 minutes is required from 9 p. m. to 5 a. m. Phone ADams 0072. Whistle: — — —.

**East Channel Bridge:** A fixed span, connecting Mercer Island with east mainland. Clearance is 38 feet.

**Bridges in order from Elliott Bay up to Duwamish Waterway:**

**West Spokane St. Bridge:** Clearance is 40 feet at mean higher high water. Whistle, for both city and railway bridges, — — — — —.

**Northern Pacific Railroad Bridge:** Clearance is 4.6 feet at mean higher high water. Whistle: — — —.

**First Avenue South Bridge:** Clearance is 20 feet at mean higher high water. Whistle: — — — — —.

**Fourteenth Avenue South Bridge:** Clearance is 32 feet at mean higher high water. Whistle: — — — — —.

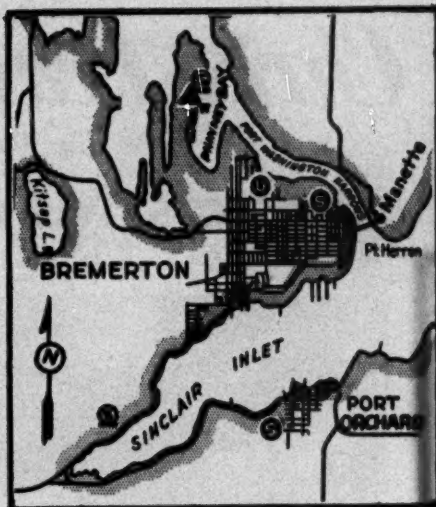
**Moorings and floats:** Commercial moorings for medium and small boats will be found just southeast of Duwamish Head on Elliott Bay and up the Duwamish Waterway. East of the government locks at Ballard, in fresh water, the Salmon Bay Terminal, operated by the Port of Seattle, has many berths available, especially during the summer months, which are rented by the day, week, or month. Yacht clubs have berths available for associate club members.

A public float at the foot of Washington St. in Elliott Bay on the south side of pier 50 is maintained by the city of Seattle. It can be utilized to load and discharge passengers, and one person must remain aboard the boat at all times while it is tied up. Permits for official parties should be obtained in advance from the chief of the Seattle Fire Department.

A public float at the foot of 24th Ave. N. W., east of the government locks at Ballard and on the north end of the canal, is available for shopping stops in the Ballard district. There is a lay over time limit of approximately two hours.

### **Bremerton:**

At Phinney Bay, Bremerton Yacht Club members now operate a marine railway at nominal rates for the benefit of all skippers of recognized clubs as well as for themselves. Berthing facil-



**BREMERTON**

ities are available for visiting boats. Gas, water, and electricity are available at the club floats, and the clubhouse has a small store.

There also are marine railways at Manette (East Bremerton), Port Orchard (two), and Poulsbo. Small boat moorages also are available at those points, and pleasure and commercial boat-building firms are newly active—notably at Winslow, Poulsbo, Waterman, Southworth, Shelton, Purdy, Gorst, Tracyton and Manette.

Two large Bremerton firms carry extensive lines of marine supplies and gear.

### **Tacoma:**

is a maritime city whose main waterfront establishments are located within Commencement Bay on Puget Sound, 25 nautical miles south of Seattle. It is a busy boatbuilding center and famous for the work of its skilled boatbuilders, who build tuna clippers and other fishing vessels and sleek pleasure craft. Full facilities for serving visiting craft exist at this busy port.

The Tacoma Yacht Club is one of the most active in the West, where boating is enjoyed on a year-around basis, with sailing races scheduled for all months of the year. The New Year's regatta for both power and sail is the only Northwest event of this type.

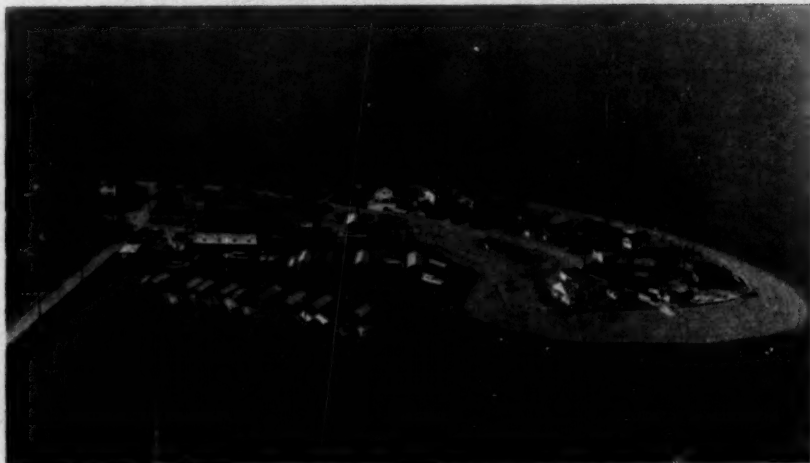
The Tacoma Yacht Club is located on the northeastern shore of Commence-

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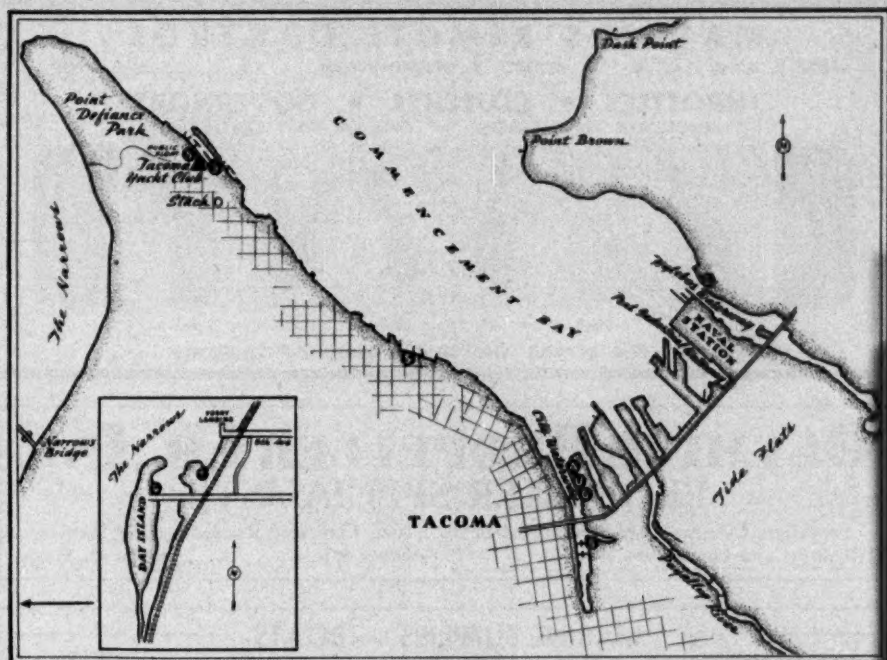
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## TACOMA

ment Bay, and can be easily found as it is just N.E. of the towering smelter stack that can be seen for many miles. The approach to the sheltered small boat harbor behind the breakwater should be made with care as the narrow entrance is near the Tacoma-Vashon Island ferry dock.

Within the small boat harbor is a public boat landing, while the landing of the Tacoma Yacht Club and clubhouse are located at the far end of the harbor. Gas and oil are available at both landings. Facilities, including guest moorings, are available for visiting yacht club members for a period not to exceed 10 days. A dining room and snack bar at the clubhouse is open from 9 a.m. to 9 p.m. every day.

During the summer months cruising is the main boating activity as Tacoma is strategically located in the midst of some of the best cruising waters in Puget Sound proper. To the south lie a myriad of islands and deep inlets that make up southern Puget Sound. To the north are the broad reaches of the Sound which includes Vashon and Bainbridge Islands and the main passages to the sea and British Columbia waters.

Day Island is a small harbor located on the south end of the entrance to the

Narrows, on the West Shore of Tacoma, east of Fox Island. Approach the harbor at Day Island from the north end of the island, with the breakwater to the port as the Day Island waterway is entered. It is advised that strangers should not attempt to navigate this waterway except at four feet or more of tide. A moorage basin is located at the north end of the island, at the east side, dredged to minus 5 feet. Gasoline, stove oil, bottled gas, ice and supplies are available, and boats up to 20 tons can be hauled out for repairs. Another small boat landing is directly opposite.

Day Island Yacht Club has an anchorage at the south end of the Day Island Waterway and should be approached with caution as a fixed bridge spans the waterway.

A naval restricted area has been established in the main harbor in the vicinity of the naval station in Commencement Bay. This includes an area within 100 feet of the northwesterly face of the station, and within 200 feet of the shore or shore structures or within 100 feet of the outboard face of vessels moored alongside in Hylebos and Port Industrial waterways. The two small boat landings on the east side of Hylebos Waterway lie outside the restricted area

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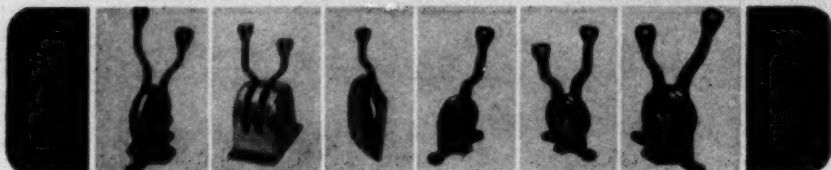
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and may be approached from the bay. Here fuel and supplies for outboards and other small craft may be obtained.

Small craft and storm warnings are flown from atop the Fidelity building in the central part of the city,  $\frac{1}{4}$  mile from the City Waterway.

#### **Tacoma bridges:**

**City Waterway:** South 11th St. Bridge. Clearance 60 feet at ordinary high tide. Whistle: ————

**Northern Pacific Railway Bridge:** South 14th St. Clearance 12 feet at ordinary high tide. Whistle: ————

**Union Pacific Railway Bridge:** South 15th St. Clearance 3 feet at ordinary high tide. Whistle: ————

**Puyallup Waterway:** East 11th St. Clearance 22 feet at ordinary high water. Whistle: ————

**Milwaukee Railroad Bridge:** Clearance 4.5 feet at ordinary high water. Whistle: ————

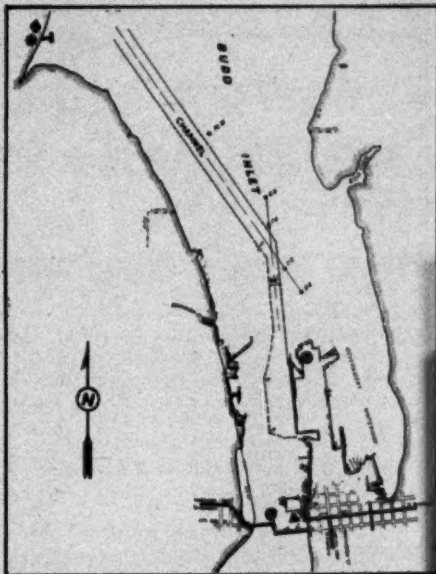
**Hylebos Waterway:** South 11th St. Bridge. Clearance 17 feet at ordinary high tide. Whistle: ————

### **Olympia:**

Olympia is situated at the head of Budd Inlet, the southernmost harbor of Puget Sound. Budd Inlet is six miles long, with an average width of one mile, extending southward to the west Fourth street highway bridge. The Des Chutes Basin has been converted into a fresh water lake. Boulevard and other improvements will make the area a recreational part of the state capitol grounds. Depths in the harbor range from  $4\frac{1}{2}$  to 6 fathoms, and good anchorage may be had anywhere inside the entrance in muddy bottom. The shores are low and wooded, and the depths shoal less abruptly on the eastern side of the Inlet, north of Priest Point. South of Priest Point on the east shore is a mud flat which bares at low tide.

The Olympia Yacht Club's moorings are found by following the regular steamship channel and may be reached at any stage of tide. Two large visitor floats for members of recognized yacht clubs are maintained at the Olympia Yacht Club. The City of Olympia maintains a float for transient commercial moorage with a 24-hour mooring limit.

Boats may not cruise nor anchor within 500 feet of the Reserve Fleet anchored in Budd Inlet, as a restricted area has been established here.



**OLYMPIA**

Small craft and storm warnings are flown from the main dock of the port of Olympia, one-half mile from the city center.

### **Everett:**

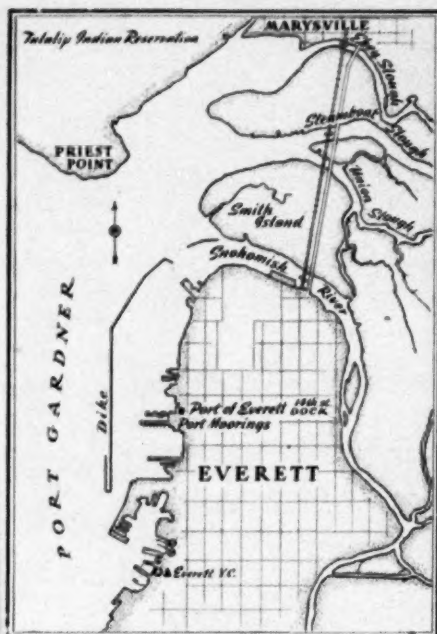
Everett is located on the eastern shore of Possession Sound (in Puget Sound) with Gedney Island lying west in the channel. It is in Snohomish County, 26 miles north of Seattle.

Everett is near good fishing waters.

Landings for visiting yachtsmen are maintained by the Everett Yacht Club at Tract M and by the Port Commission at 14th St. offering hospitality to visiting boats up to 65 feet in length and 12 foot draft.

Recent additions to Everett facilities are the new small boat moorings of the Port Commission located at 14th Street. The river channel has been dredged to 8 feet at mean lower low water, with 14 feet at extreme low in the moorage basin. The channel to 14th Street lies immediately west of the Everett Pacific Shipbuilding plant, and is inside the jetty running north. Two dolphins with signs indicate the entrance to the mooring area.

Small craft and storm warnings are flown on the city dock, west of the city center, at the Yacht Club.



### EVERETT

Several local stores specialize in ship chandlery and all regular city entertainment and shopping accommodations are available.

Boat repairs for any size boat or ship are within easy reach of the public moorages.

### Cornet Bay

is the site of the first marine park established in the state. It is located on the southeast shore of Cornet Bay on the north shore of Whidbey Island, just east of Deception Pass bridge. A mooring area has been established, a pier has been built, and shower rooms and picnic grounds are available. This park, established specifically for boat owners, is an ideal place to wait for a change of current before making a westerly passage through the pass. The currents in the narrows of the pass attain velocities of 5 to 8 knots, with strong eddies forming along the shore.

### Swinomish Slough:

Swinomish Slough is a dredged channel connecting the waters of Skagit Bay with those of Padilla Bay, 5 miles north-

ward. The southern and northern approaches are well marked and the channel has a project depth of 12 feet from Skagit Bay to deep water in Padilla Bay.

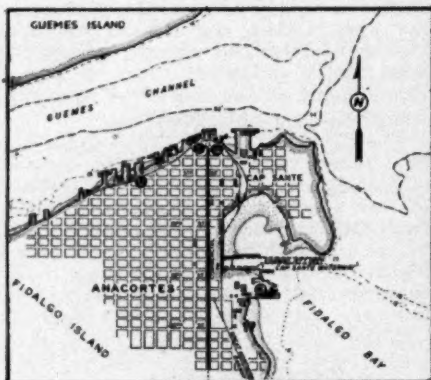
At the northerly entrance there are railroad and highway bridges with horizontal openings of 94 and 100 feet, and vertical clearances of 4 feet and 12 feet, respectively at ordinary high water. At La Conner there is a bridge with a horizontal clearance of 100 feet and a vertical clearance of 6.7 feet at ordinary high water. The signal for opening these bridges is four long blasts.

Small boats and yachts en route between Seattle and the San Juan Islands often use Swinomish Slough in preference to Deception Pass because of the weaker current and more protected channel.

To approach Swinomish Yacht Club at La Conner from the south, enter well-marked channel approximately one-half mile to the west of Goat Island, keeping sharp lookout for rock jetty (under water at high tide) paralleling this channel on the south side. Pass close to north side of Goat Island and proceed through Hole-in-the-Wall and north one mile to La Conner. Club moorings are at floats north of Whiz Fish Company. Guest moorings are available at gas dock at center of mooring floats. Yachtsmen may also tie up at city dock just south of bridge while purchasing supplies.

### Anacortes:

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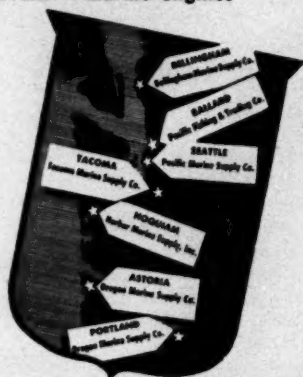
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It is the geographical center of the Puget Sound fishing industry, as it is at the northern end of Fidalgo Island, on Guemes Channel in Puget Sound, 43 miles south of Bellingham, with the San Juan Islands to the westward. Boat moorings, fresh water, ice, gasoline, fuel and lubricating oils, ship chandlery and provisions are available here.

The inner harbor provides the best moorings for small craft.

### **Bellingham:**

Small boat moorings are provided by the Port of Bellingham, one near the center of the city and two on the north side, each accommodating from one to two hundred boats. In addition to these, the Bellingham Yacht Club has constructed a small basin adjacent to its clubhouse at the foot of Cornwall Avenue. Moorings are available here to all visiting yachtsmen, as well as all facilities and services required. Fishermen's Cove at Gooseberry Point, offers private moorage along its 120-foot dock.

Located at the head of Bellingham Bay, Bellingham is the northernmost port of importance in the state of Washington, and is a port of entry for vessels traveling between the United States and British Columbia. It is on the east shore of the bay, and across Rosario Strait from the San Juan Islands to the west.

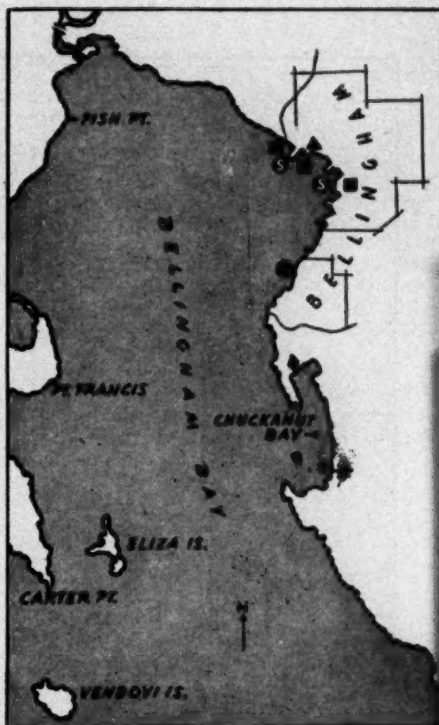
Principal entrance to the bay, which is 12 miles long and three miles wide, is through Bellingham Channel, which extends northward from Anacortes almost to its southern extremity.

Work is continuing on the Port of Bellingham's small boat harbor development. Ultimate capacity of the basin will be 1,000 boats. Now it harbors approximately 300 vessels, both commercial and pleasure craft.

The Bellingham Boat Owners' Association now has its club moorage and clubhouse at the new port commission boat haven on Squalicum fill.

Small craft and storm warnings are flown on a hillside near the city dock, west of the city center.

The Bellingham Yacht Club has its clubhouse and mooring at the foot of Cornwall Avenue. There are two visitor's floats available but space is limited and visitors at present are asked to limit their stay to three or four days.



**BELLINGHAM**

Upon completion of the port's boat haven the yacht mooring facilities in Bellingham are expected to be vastly improved. The yacht club serves lunches and dinners week days, dinners on Saturday and Sunday.

### **Friday Harbor:**

The largest town in the San Juan Islands, its only freight connection with the mainland by water, Friday Harbor sees most of pleasure boating through visiting craft.

These picturesque islands draw hundreds of visiting boats all year long. It is an American custom port for boats crossing into Canadian waters. It is now served by airways from Seattle, which affords persons the opportunity of "catching-up" with a cruise that is already under way.

Friday Harbor is located on the eastern shore of San Juan in Puget Sound, lying north of Port Townsend and northeasterly of Victoria, B. C. Complete facilities for moorage of all types and sizes of fishing and pleasure craft are





### FRIDAY HARBOR

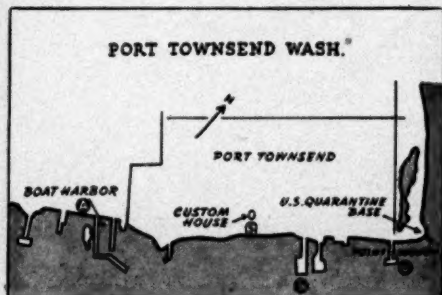
available for visitors. All regular city facilities are found here.

Both the Standard and Union stations maintain floats and proper facilities for serving yachts of all sizes.

### Port Townsend

is located on Admiralty Inlet at the entrance to Puget Sound, with Whidbey Island lying to the east. The city is about fifty miles east of Port Angeles and it is the second city contacted by shipping from the west. It is also a port of entry or of clearing, and a shelter from rough weather on the Strait of Juan de Fuca.

A boat harbor, mainly for fishing craft but used by pleasure boats, is complete with floats. The boat harbor is well lighted and equipped and is considered to be one of the few enclosed harbors of this type in the Northwest. Members of the Port Townsend Yacht Club keep their boats here. A guest float is maintained for the convenience of all visiting yacht club members. Regular provision and ship supplies are carried by the local stores.



### PORT TOWNSEND

A modern Coast Guard craft moors at the harbor and stands ready for call in any case of emergency. Small craft and storm warnings are flown on a high bluff one half mile N.W. of the city center.

### Port Townsend Canal:

Oak Bay is connected with the head of Port Townsend (bay) by the Port Townsend Canal, which is maintained 75 feet wide and 15 feet deep, and is marked with aids to navigation. The current is strong at times. There are two overhead wire crossings here with minimum clearance of 131 feet at ordinary high water. Speed limit is 5 miles per hour. From May 1 to October 1, 1951, the channel will be partially closed, as it will be obstructed by the falsework of a concrete bridge, making navigation hazardous for boats with tows.

### Quilcene

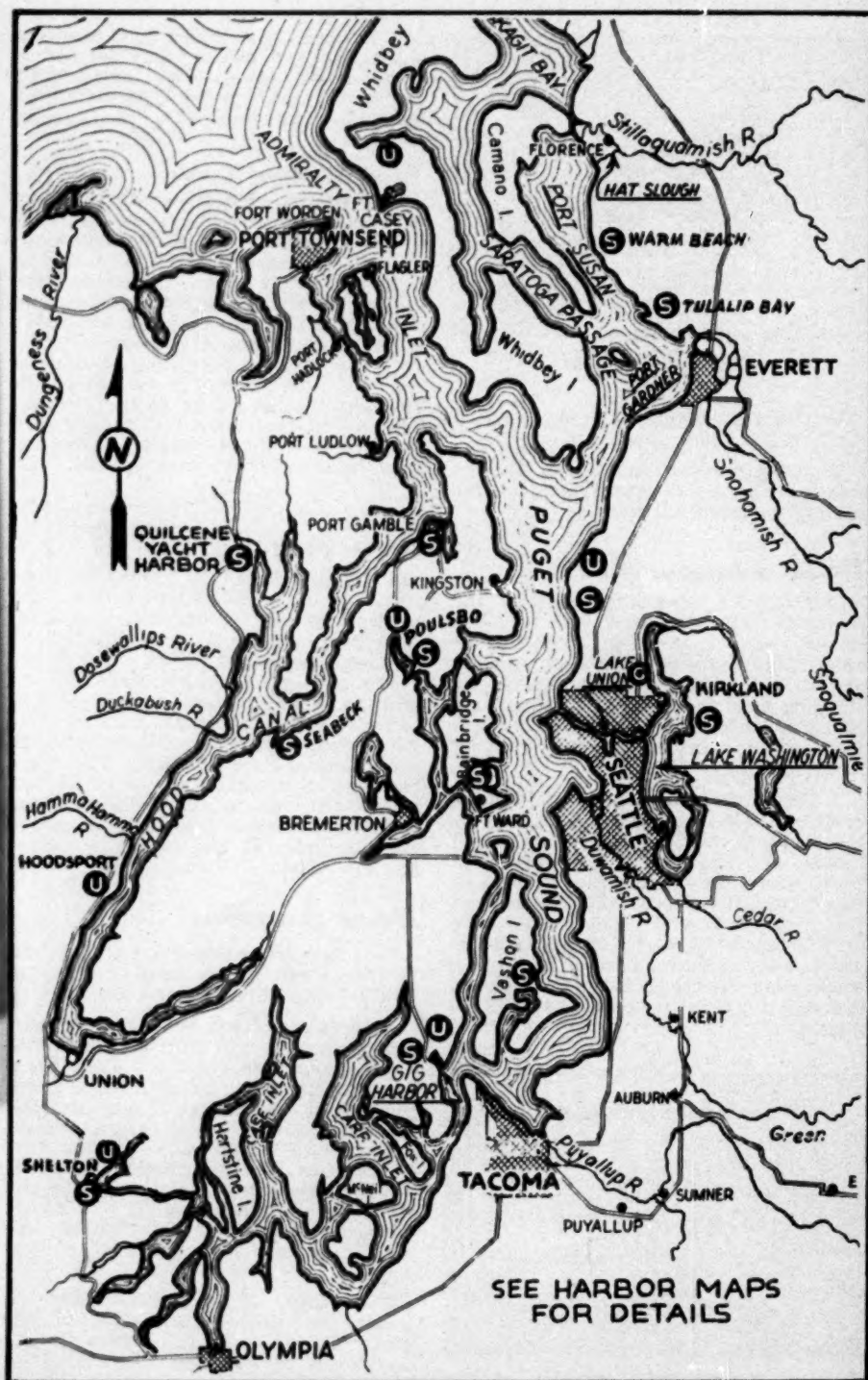
has the only improved harbor on Hood Canal. A new yacht harbor has been constructed on the west shore of Quilcene Bay near the town of Quilcene by the Jefferson County Port Commission. There are permanent stalls for 24 cruisers as well as ample space for visitors and over-night cruise parties. Electricity and marine facilities for gas, oil, water and ice are available. Inside the harbor is a minimum depth of 10 feet of water at extreme minus tide, although at a 1 foot minus tide there is only 3 feet of water at the harbor entrance.

### Port Angeles:

Port Angeles is important to the fishing fleets and to the boats of all types that go outside from Puget Sound.

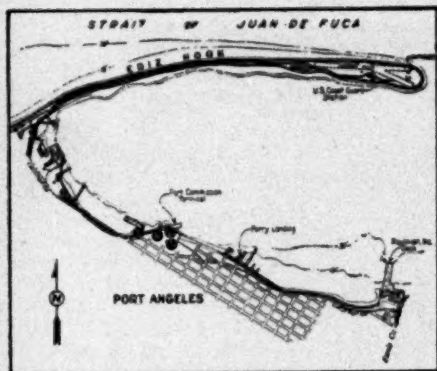
A large, new boat basin has been recently completed, to offer the finest protection to boats. There are 4,000 lineal feet of floats available with light, power connections and marine fueling stations. The boat haven and Port Angeles Yacht Club landing is just N.W. of the Port Commission terminal shown on the accompanying map. A ship chandlery and coffee shop is located at the boat haven. Complete information on the use of these can be obtained from the Port of Port Angeles.

The City of Port Angeles is located on the southern side of the Strait of Juan de Fuca, 17 miles directly across the Strait from Victoria, B. C. The harbor is made extremely safe by



NORTHWEST WASHINGTON WATERS

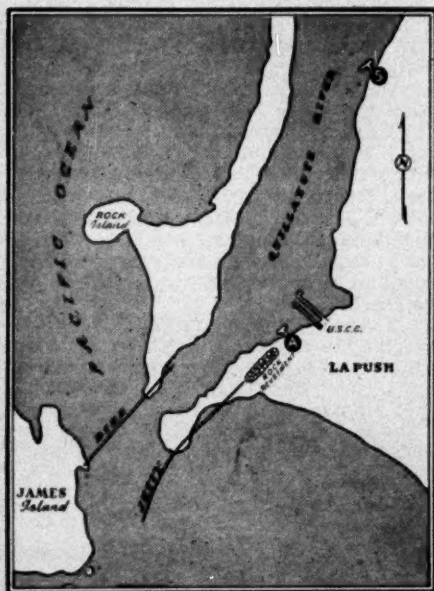




### PORT ANGELES

the protection of Ediz Hook Spit, a natural land formation to the west, varying from 100 to 1000 feet in width and extending three miles into the water, giving approximately twelve square miles for safe anchorage at all times. City water is piped free onto the docks. Local stores carry a supply of provisions and there are many machine shops which specialize in motor craft repairs. A marine ways is available for boats up to 90 feet.

Small craft and storm warnings are flown from the 65-foot bluff in the center of the business district.



### QUILLAYUTE RIVER

### La Push:

Quillayute River, located on the Washington coast about 31 miles south of Cape Flattery, is the only refuge for small boats between Grays Harbor and Neah Bay, with the exception of Destruction Island which offers anchorage shelter from offshore winds only. Here is located the village of La Push.

Quillayute River enters the ocean just shoreward of James Island, a wooded rocky island 183 feet high, upon which the coast guard maintains a flashing light and horn fog signals. Two buoys assist visiting mariners to reach the entrance. Dangerous rocks lie along the coast line both north and south of the island and the approach must be made generally from the southwest.

The coast pilot advises against attempting to enter the mouth of the Quillayute River in southerly weather when breakers often form across the entrance, and it further advises persons not familiar with the entrance to lay-to near a red buoy located off the jetty on the east side of the entrance until the coast guard sends out a boat to pilot the craft in. The channel lies close to James Island and a dike which connects the island with a sand spit on the mainland, on the west, or ocean, side of the channel. The controlling depth at low water was about six feet in April, 1948. The river channel is reported to change frequently.

General supplies, gasoline and oil, may be purchased at the La Push dock. The coast guard maintains a life saving station at La Push. Here small craft and storm warnings are flown.

### Grays Harbor:

Grays Harbor has its entrance 40 miles northward from Cape Disappointment and about 93 miles southward from Cape Flattery. It forms an outlet for one of the state's most important lumber and pulp districts. Port of entry is at Aberdeen. Entrance to the harbor should not be made without the use of government charts.

Anchorage may be had anywhere in the channels inside the bay. The best anchorage for large vessels is southward of Sand Island in depths of 35 to 40 feet. Small boat landings are located along the waterfront of Westport, Hoquiam and Aberdeen, and public landings may be made at the port docks which are abreast of the east end of Rennie Island. Dockage may also be obtained farther up the river at South Aberdeen. Public fish boat moorings and a public dock for use of the trolling boat

fleet are provided by the two cities and by the Port of Grays Harbor at Westport.

Ice, provisions and general ship supplies are available. Repairs and marine supplies also draw boats to this port.

Small craft and storm warnings are flown at Westport, adjacent to the fog signal building on Point Chehalis,  $\frac{1}{2}$  mile from the ocean on the south side of the Grays Harbor entrance; and at the Port of Grays Harbor dock, half way between Aberdeen and Hoquiam.

**Bridges:** (Showing vertical clearance at ordinary high water and the necessary whistle signals required to open them.)

**Chehalis River:**

Union Pacific Ry. 8 feet. Whistle: — — — —

West Highway. 8.5 feet. Whistle: — — — —

Northern Pacific Ry. 9 feet Whistle: — — — —

**Hoquiam River:**

Northern Pacific Ry. 8 feet. Whistle: — — — —

Simpson St. 36 feet. Whistle: — — — —

Eighth St. 8. 8 feet. Whistle: — — — —

Northern Pacific Ry. 3 feet Whistle: — — — —

East Fork. 3.5 feet. Whistle — — — —

**Wishkah River:**

Northern Pacific Ry. 8 feet. Whistle: — — — —

Wishkah St. 4.6 feet. Whistle: — — — —

Young St. 6 feet. Whistle: — — — —

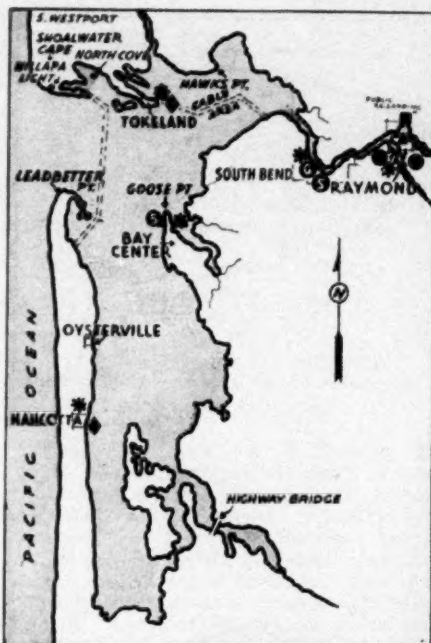
**South Bay:**

Bay City highway bridge. 5.7 feet Whistle: — — — —

## **Willapa Harbor:**

is 25 miles long and 11 miles wide at the widest point, with the Willapa River entering at the northerly end. Willapa River is navigable from the Bay to Willapa City, three miles above Raymond, some 20 miles from the bar. Principal cities on Willapa Harbor are Raymond, South Bend, Bay Center, an oyster and crab fishermen's headquarters, Tokeland, a bay beach resort and fishermen's haven, and Nahcotta, gateway to North Beach summer and winter resorts with an unbroken wide hard sand beach 26 miles long.

The entrance is in the northern part of the bay, which consists of two arms;



**WILLAPA HARBOR**

the southern, 16 miles, and the eastern, 10 miles long. Both arms are filled with extensive shoals, large areas of which bare at low water.

Willapa Harbor offers excellent facilities for yachtsmen, the only requirement being the possession of a chart to avoid the shoals. All channels are buoyed. At high water, small craft can travel any place in Willapa harbor. Tide tables are available at any store. Fresh water is obtainable at Tokeland Port Dock, City Dock, South Bend; Port Dock, Raymond City Dock and Public Dock at Nahcotta. General repair shops, long distance telephone stations, fishermen's supply stores and many other traveling conveniences await visitors to the Harbor.

A 450-foot float is available for small craft at the city dock at Raymond.

Small craft and storm warnings are flown two miles from South Bend, toward Raymond; and at the north shore of the Willapa Harbor entrance, on Cape Shoalwater, adjacent to the lookout tower.

## **Columbia River Ports**

All Washington ports on the Columbia River, Ilwaco, Longview, and Kelso, are shown in the Oregon harbors section this year.

# OREGON

## Harbors

**W**HILE OREGON'S cruising waters are limited to the coastal area and the Columbia River system, the Oregon customs district boasts nearly 10,000 numbered craft and another 1,000 or so documented vessels, many of which are pleasure craft. Boating has increased rapidly in popularity in the state since the recent war and at present is enjoying its greatest patronage.

Most of the pleasure fleet is based in the Portland area, the greatest concentration of population, and here are located the leading yacht clubs and moorages. However, Astoria, Coos Bay, Depoe Bay, Newport, and Warrenton have moorages where many pleasure craft tie up either as home ports or during cruising and fishing seasons.

The Oregon coastline is nearly 300 miles long with comparatively few indentations and harbors of refuge. It is rather straight north and south, with broad sandy beaches at the bases of rugged mountain ridges running almost to the ocean. Going south from the Columbia river, the principal harbors available to small craft are Tillamook, 54 nautical miles from Astoria; Depoe Bay, 99 miles; Yaquina Bay (Newport), 110 miles; Umpqua river, 167 miles; Coos Bay entrance, 187 miles; Crescent City, Cal., 290 miles south. Other coastal river entrances are not recommended to pleasure craft because of dangerous bars although some of them can be entered at slack high water by persons having local knowledge.

The Columbia is noted as a broad, fast-

flowing stream, carrying the largest flow of water emptying into the Pacific ocean on the western coast of North America. It has a range of approximately 30 feet at Portland between low water and extreme flood stages and its velocity reaches as much as 5 or 6 knots above Portland during flood periods. During normal low water stages the current flows one to two knots. Tidal effects are felt beyond Portland during low water periods and operators of low-powered craft take advantage of the flood tides when running up the river from the Astoria vicinity to Longview, Portland and beyond.

During the summer months, the soft, sandy beaches of the bars and islands in the lower Columbia are favorite outing spots for pleasure craft. Fishing for chinook salmon is popular in the St. Helens, Portland and Oregon City area during March, April and May, and at Astoria, Longview, Kalama, St. Helens and Troutdale in August and September. Steelhead, harvest trout, smelt, and pan fish are sought during their seasons.

Charter boats are operated out of Depoe Bay, Newport, Astoria, Tillamook, and Coos Bay. Marine service stations, repair shops, and dealers are located in all of the more populous communities.

An information pamphlet on small boat harbors along the Oregon coast and inland waters is published by the Corps of Engineers, U. S. Army, Portland. Maps and detailed information make this a valuable guide to the small boat operator in Oregon.

---

## Portland

the metropolis of Oregon, with 500,000 persons residing in the area, is situated about 100 miles from the Ocean, on the banks of the Willamette River, a few miles above its confluence with the Columbia River. The center of organized yachting is in the Columbia River north of the city. Here are located four yacht clubs, the Portland Yacht Club, Columbia River Yacht Club, the Oregon Yacht Club, and Rose City Yacht Club.

The Columbia River and Willamette ship channel is at least 35 feet deep from Portland's central harbor area to the ocean, and ranges in width from 500 feet to several thousand feet. United

States Corps of Engineers dredges keep it dredged to project depths at all times, and the Coast Guard has it well marked with navigation aides and lights. Coast and Geodetic Survey charts clearly show the channels.

The channel east of Portland also is well lighted for night operations as far as Pasco, Washington, and has sufficient depth at all points for all types of river craft. Commercial towboats operate daily to The Dalles, Celilo, Umatilla and above.

Visiting yachts usually tie up as guests of the Portland Yacht Club or Columbia River Yacht Club, but visitors desiring to berth close to Portland's business district tie up at the public mooring at the

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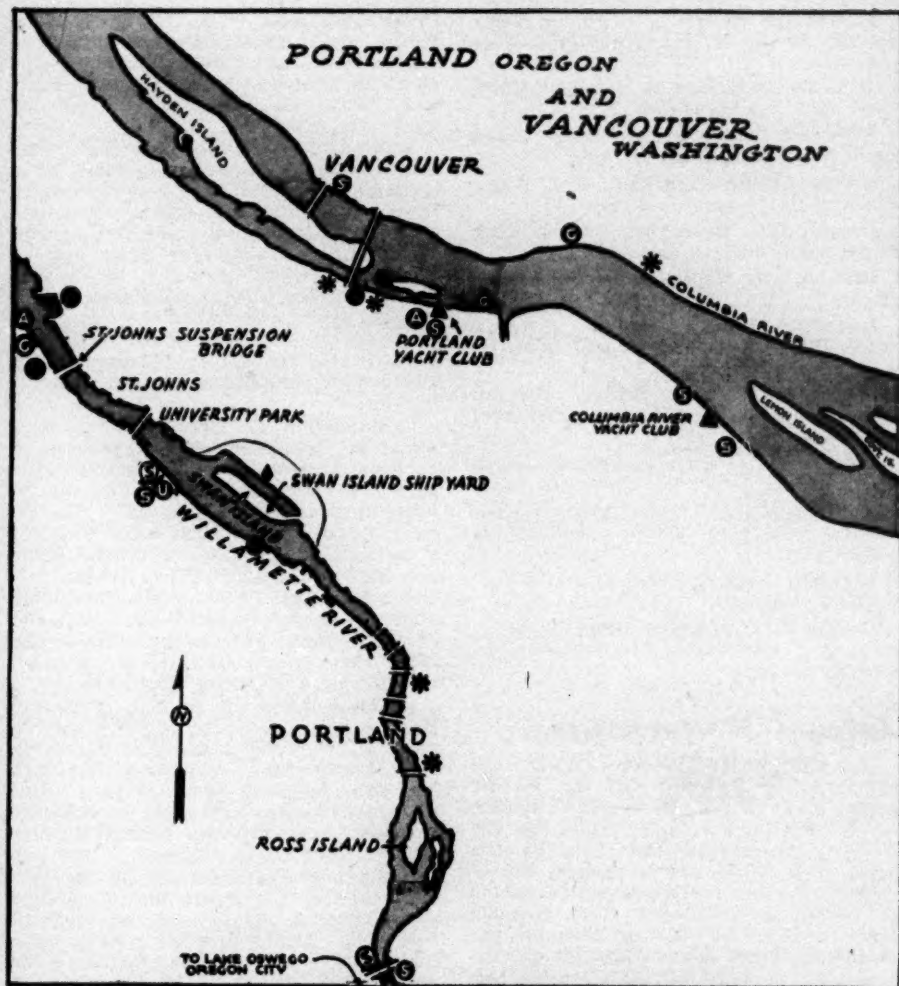
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### PORTLAND, OREGON - VANCOUVER, WASHINGTON

foot of S.W. Jefferson street, just above the Hawthorne bridge. Here they are within a few blocks of the business center.

Portland area is well supplied with marine service stations. The majority of these are located along the Willamette River, but some are on the Columbia River. The oil companies dispense gasoline and diesel oil at their ocean docks in the Linnton and Willbridge sections, but are not permitted by city ordinance to handle it elsewhere inside the city limits. Diesel oil and stove oil, as well as gasoline, also are available at Portland Yacht Club to visitors from out of the city. Numerous repair yards and shops are available on both rivers.

Bridges in order from St. Johns to Oregon City on the Willamette River with vertical clearance at low water:

**St. Johns Bridge** at St. Johns. Suspension bridge with 203 feet clearance at low water.

**SP&S Bridge** at St. Johns. Swing type. 55 feet clearance. Whistle: — — —

**Broadway Bridge** at Portland: Bascule type. 90 feet clearance. Whistle: — — —

**Steel Bridge** at Portland. Vertical lift, 26 to 164 feet. Whistle: — — —

**Burnside Bridge** at Portland. Bascule, 64 feet clearance. Whistle — — —

**Morrison Bridge** at Portland. Swing type, 33 feet clearance. Whistle: — — —

**Hawthorne Bridge** at Portland. Vertical lift, 50 to 164 feet. Whistle: — — — — —

**Ross Island Bridge** at Portland. Fixed span, 120 feet clearance.

**Sellwood Bridge** at Portland. Fixed span, 74 feet clearance.

**Oswego Railway Bridge** at Oswego. Fixed span, 74 feet clearance.

**Oregon City Bridge** at Oregon City. Fixed span, 62 feet clearance.

**Bridges over Columbia River at Vancouver:**

**Interstate Railway Bridge.** Swing type. Vertical clearance 40 feet. Whistle: — — — — —

**Interstate Highway Bridge.** Vertical lift type. 39 to 175 feet. Whistle: — — — — —

**Bridges on Oregon Slough at North Portland:**

**Railroad Bridge.** Swing type. 40 feet vertical clearance. (Arrange for opening before arrival).

**Highway Bridge.** Fixed span. 39 feet vertical clearance.

**Bridge over Columbia River at Longview** is a fixed arch, 194 feet vertical clearance.

## Inland Waterways

In addition to cruising down the Columbia to Astoria and the Pacific ocean, many of the pleasure boat owners of the Portland vicinity cruise up the river to Bonneville, pass through the great lock which has a vertical lift of 65 feet. Personnel are now not permitted to board or disembark from floating craft moored or passing through the Bonneville Dam reservation.

Boats may pass through the locks and continue up Lake Bonneville toward The Dalles, stopping over night in several protected anchorages, such as Eagle

Creek, one mile from the dam; Wind River, nine miles; Drano lake, the mouth of the Little White Salmon river, 18 miles; Hood River, Ore., and Underwood, Wash., 24 miles; Klickitat river, 35 miles; Crate's Point, 39 miles.

Beyond The Dalles, the route lies through the Celilo locks and canal for a distance of nine miles, involving two or three lifts and some narrow passages between the banks and commercial barge tows. Miller Island, four miles east of Celilo, is visited annually by a few yachtsmen, but insurance coverage often stops at the upper end of the canal.

Indian relics may be found on Mema-loose Island and Miller Island, both of which were camping and burial sites for Indians.

Construction of McNary Dam, near Umatilla, Ore., is expected to provide an excellent new boating area between the dam and Richland, Wash., nearly 50 miles upstream. One portion of the resulting pool will be three miles wide for a distance of 10 miles, with side channels extending up the Walla Walla river and Snake river. Walla Walla Boat Club plans a moorage on the Walla Walla river arm, while swimming beaches and other recreational facilities are planned by the Corps of Army Engineers.

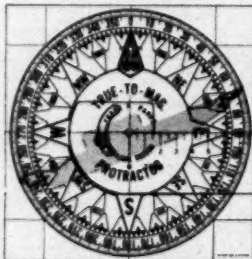
A water rodeo will be held at McKay Dam, seven miles south of Pendleton, on June 17. Sponsor is the new Pendleton Boat Club, who have built a new dock and boat handling facilities here. This club plans to also establish moorings on the newly-forming lake behind McNary dam on the Columbia River.

Small boats often cruise up the Willamette river above the dam at Oregon City, which is negotiated by a set of five locks. The Willamette river is more hazardous in this section because of the presence of rocks and shallow bars in places. Local knowledge or expert pilotage is recommended for these waters. Moorage of the Riverside Yacht Club is

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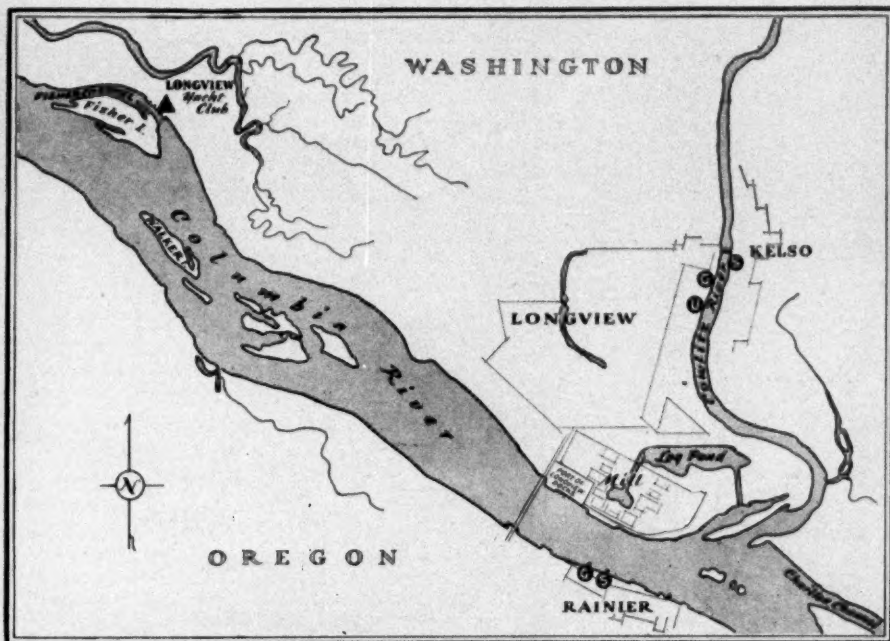
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### LONGVIEW

about seven miles above Oregon City on the Willamette, near Walnut Eddy.

The Willamette is navigable for many miles inland for venturesome voyageurs. Flanked by high banks and tall trees it winds through the most fertile land in the state.

Champoeg state park, the birthplace of the Oregon territory, is located on the Willamette river 20 miles above Oregon City dam.

In addition to scattered natural lakes throughout Oregon, boaters are finding the man-made reservoirs being provided by the United States corps of engineers in the upper Willamette valley as boating paradises during the summer.

The Eugene Yacht Club of Eugene, Oregon, is completely land-locked as its moorings are located on Fern Ridge Lake, about 18 miles west of Eugene. This is a man-made lake. Visiting yachtsmen are welcome, and if they are trailing a boat, they are welcome to use the landing facilities at any time.

### Longview, Washington:

Longview is the center of boating activity half-way between Portland-Vancouver and the mouth of the Columbia River.

The Longview Yacht Club club house and mooring is located five miles down river from Longview on Fisher Island channel, a part of the Columbia River. Gasoline, electricity, telephone and moorage is available to all visiting yachtsmen.

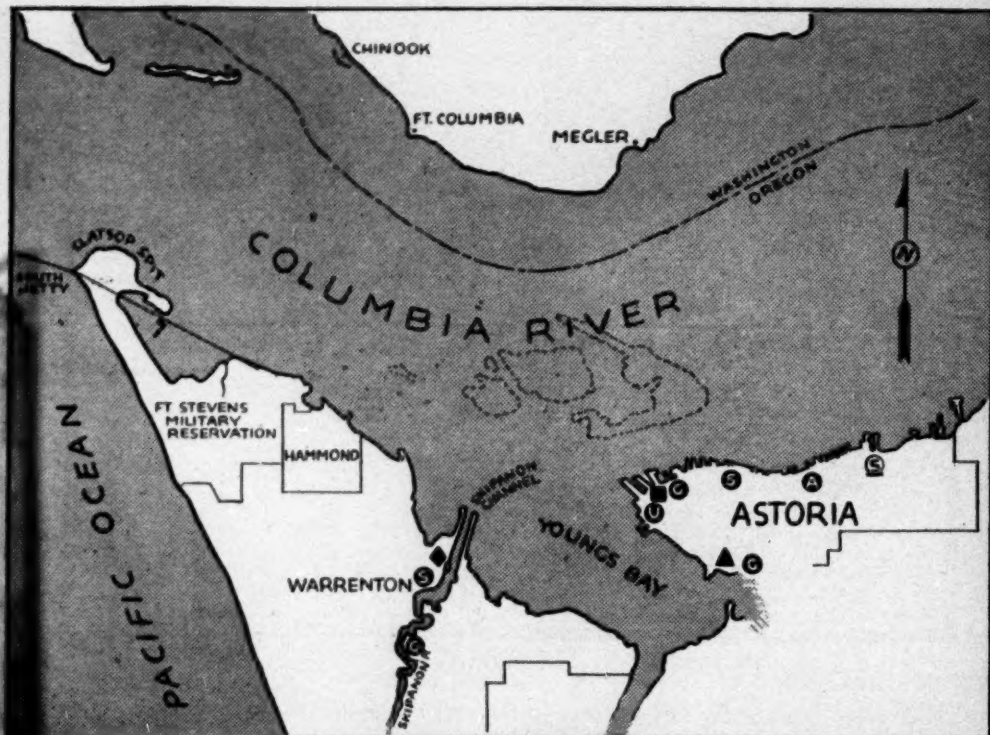
Longview is just westward of the mouth of the Cowlitz River. The Longview Bridge connects it with Rainier, Oregon. It is built around the activities of an extensive lumber development. Fresh water, fuel and diesel oil may be obtained in any quantity.

Longview and Kelso, divided by the Cowlitz River, have several fine marine stores and service facilities which serve the combined area. The Port of Longview has ample facilities for lifting pleasure craft of any size and type to and from the water.

### Kelso, Washington:

Kelso, on the Cowlitz River, has boating facilities and is the annual host to many small outboard and inboard powered boats that are primarily used for fishing.

Cowlitz is a bee hive of activity each spring when the smelt run is on, commercial and pleasure fishermen using every means to scoop out the shiny horde.



LOWER COLUMBIA RIVER

### ***Rainier***

the home of an active tug fleet, has two boat yards which are adequate to take care of small craft. One has two marine railways for boats up to 125 feet, and the other has two marine railways for boats up to 175 feet. Diesel fuel is available at Smith Tug Company boat dock. Other services are located at Longview across the Columbia River.

### ***St. Helens***

is located on tidewater, 24 miles below Portland where the Lewis River, Lake River, Scappoose Bay, Multnomah Channel, and the Columbia River have a common junction. There are two small boat moorages with gasoline and diesel fuel available. They also have outboards for rent, marine supplies, fishing tackle, outboard and inboard engine repairs, fresh water, telephone, electricity and taxi service. The moorages are located within 3 blocks of the business district where there are restaurants, barber shops, beauty shop, stores, court house and liquor store.

### ***Westport***

Oregon, a mill-supported community on the Columbia River, has a lot of work boat and pleasure boat activity. Westport has its own boat club, has been active with a Sea Scout ship. Marine fuel service may be obtained here. The boat club has its moorage in Beaver Slough, near Clatskanie, 10 miles east of Westport.

### ***Astoria***

the principal city on the lower Columbia, is located on the south bank of the river, about twelve miles from the Pacific Ocean, and extends from Youngs Bay to Tongue Point.

The Columbia River jetties extend into the ocean at the mouth of the Columbia. Clatsop spit lies to the south of the entrance and Peacock Spit and Cape Disappointment to the north.

A small boat mooring basin with moorages for 400 boats is operated by the Port of Astoria adjacent to its ocean terminal in the west end of Astoria. Construction of breakwater for a large



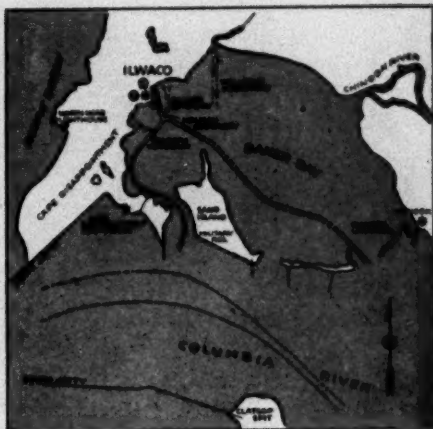
new basin in the east end of the city was completed in 1950. Moorage facilities inside the breakwaters are now being installed and when all are completed there will be accommodations for 1000 boats. Larger boats can usually secure temporary berthage space at the ocean terminal. Transient boats must register at mooring basin offices and arrange for berth.

In addition to these moorages, facilities for fishing boats are numerous adjacent to canneries located along Astoria's waterfront.

The Astoria Yacht Club located in Youngs Bay boasts one of the finest plants in the northwest and can handle 100 or more boats.

Fuel stations, provisions of all kinds, ice, oils, ship chandlery, and all other conveniences are in abundance at this port. Boat yards, engine repair establishments, marine sales centers and complete services are available.

A restricted area has been established in the vicinity of the U.S. Naval Station, Tongue Point, and the U.S. Maritime Commission Reserve Fleet moorage in Cathlamet Bay, Oregon. Passage of small boats into John Day River from the east by way of Cathlamet Bay is permitted.



ILWACO

### ***Ilwaco, Washington:***

Ilwaco is the closest city to the Columbia River bar and it is a great commercial fishing port.

Ilwaco is almost true north of Peacock Spit, is located near North Head and Cape Disappointment, at the south-

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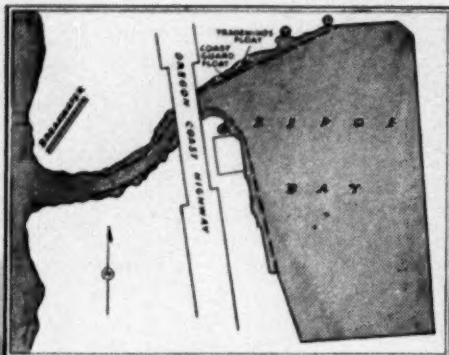
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DEPOE BAY

western tip of Washington. It is a most important port at the mouth of the Columbia River, the settlement lying on the north shore.

A new entrance to Ilwaco has been dredged between Peacock Spit and Sand Island.

There is a large basin for small boats and gridirons on which boats can be drydocked. Ice, stores, fishermen's supplies and provisions are available.

Small craft and storm warnings are flown one half mile S.W. of the post-office on the dock waterfront.

### **Tillamook Bay**

on the Oregon coast, is 45 miles south of the Columbia River entrance. The bay is 6 miles long, in a north and south direction, and has an average width of about 2½ miles. A mooring basin for small boats is maintained at Garibaldi by the port of Bay City. The entrance and inner channels are well-marked, and there is a Coast Guard station at Garibaldi.

The mooring basin, about a quarter-mile from Garibaldi, has facilities for servicing commercial boats. Oil, gasoline and water are available.

### **Depoe Bay**

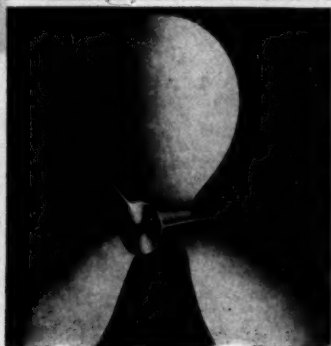
located on the Oregon coast in the northern portion of Lincoln County, has been closed for the entire summer of 1950, but was officially reopened by an impressive ceremony in April, 1951.

The entrance channel now has a minimum width of thirty feet and a minimum depth of eight feet at mean low water. This entrance is now protected by a sea wall on the north side. Inside, the basin is now 750 feet long with an average width of 375 feet. Here, as in the channel, the minimum depth is likewise eight feet at mean low water.

The basin is now protected by a sea wall on the east side 660 feet in length and by a further wing 90 feet in length on the north end, with an additional wing 50 feet long on the south end. All of the walls extend 13 feet above mean low water.

The northern end of the basin will be used primarily by the United States Coast Guard, the Tradewind Trollers, and the Pacific Trollers, who will maintain their own facilities. In the southern end of the basin and along the east side, several 120-foot finger piers or floats will be maintained for the convenience of the commercial fishermen and the owners of sport cruisers.

Port facilities will be maintained by the Columbia River Packers Association, the New England Fish Company of Oregon and the Yaquina Bay Fish Company. All types of fishery products, ice and fuel are available.



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## Yaquina Bay

is situated on the Oregon coast,  $3\frac{1}{2}$  miles southwestward of Yaquina Head lighthouse and is a tidal estuary. The Bay proper is only the widening of the Yaquina River, just inside the north entrance. Newport, located inside the north entrance is the principal town on the river, and is a port of entry and summer resort.

The north point at the entrance to the Bay is a rounding, sandy bluff, 120 feet high. The old lighthouse tower, and the hotels and cottages near the entrance, are most prominent as daymarks.

The entrance has been improved by the government. Jetties have been built out from the north and south points, and several rocks in the channel crossing the bar have been removed. The bar is lumpy and uneven, with a hard bottom and depths subject to comparatively slight changes.

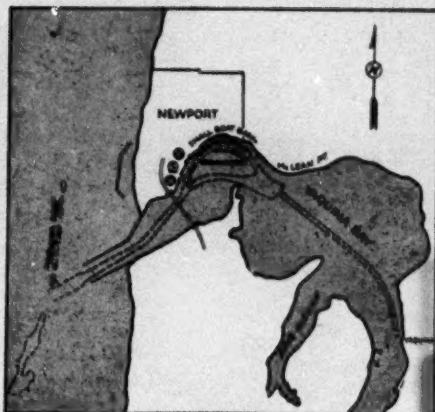
Vessels choose anchorage in the channel at points found suitable to their draft. Moorings are at the wharves at Newport, and at other wharves at Toledo, farther up the estuary.

Water and petroleum products are available at marine service stations. Provisions and ship chandlery are available.

Fuel, fresh water, ice and provisions can be obtained at Newport. New stores and moorages, and several civic recreational events will keep Newport in the boating swim.

## Umpqua River

and Winchester Bay, 21 miles northward of Coos Bay, on the Oregon Coast, is navigable all year except when breaking seas at the entrance prevent entering



YAQUINA BAY

or leaving the river. The channel depth on the Umpqua bar is 22 feet.

The Winchester Bay Tidelands park and boat basin, dedicated last summer, has provided easy access to this harbor for sportfishermen in quest of salmon and striped bass. The channel in the basin proper has been dredged to six feet at mean low water. A new concrete boat loading ramp has been built for trailer-transported boats, with adequate car parking space alongside.

In Winchester Bay there is a Union marine service, with oil, gasoline, and water, a boat charter service, grocery store, tackle shops, sea food stands, four cafes, and three good motor courts.

There is a boat repair yard in Reedsport, five miles up the river.

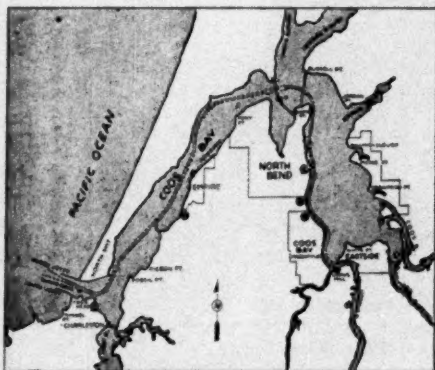
## Coos Bay

on the Oregon Coast, lies 33 miles northward from Cape Blanco, and  $1\frac{1}{2}$  miles north of Cape Arago lighthouse. It is thirteen miles long and one mile wide.

The bay entrance is near the southern part. A jetty, 9,520 feet long, extends westward from the end of the north spit. Another jetty extends to sea from Coos Head, south of entrance. The bar has been dredged, and by this means the channel, across the bar, has been deepened.

The bay, since its improvement, can be used as a harbor of refuge. Small boats can sail it safely except in unusually heavy weather. Ample wharfage can be found at the city of Coos Bay.

Bait can be procured in abundance. Fuel supplies, foods and repair facilities are obtainable along the waterfront.



COOS BAY





# NORTHERN CALIFORNIA

## *Harbors*

**Y**ACHTING and small boating is one of the major sports of northern California both inland, on San Francisco Bay and its tributaries and in the mountain lakes.

Starting down the Coast one finds that yachting and small boating has been revived and is most active through the efforts of the Humboldt Bay Yacht Club at Eureka, on Humboldt Bay. A full program of cruises and outboard races is offered during the season.

Across the mountains just above Redding is magnificent Lake Shasta, backed up by mighty Shasta dam. A program of fish planting by various governmental agencies in connection with sportsmen, will assure fine fishing on this lake in just a few more years. Here the Shasta Lake Boat & Yacht Club is active, along with other boat minded residents of the area.

Clear Lake, California's largest body of fresh water entirely within the boundaries of the state, will be busier than ever before with boats and boating.

Again will Lake Millerton, one of the newest boating spots in the state, respond to the roar of inboard and outboard engines. Small boat sailing is a

sport that is also gaining much favor on this lake.

Shaver, Huntington, and Bass Lake, all up in the mountains east of Miller-ton, above Fresno, will again be thronged with small boats.

Lake Tahoe, the "Lake of the Sky" will be alive with power boats, and there will be a big program of events organized by the Tahoe Yacht Club, and also by the Lake Tahoe Flotilla No. 61, USCGA.

San Francisco Bay and its tributaries will see major cruising events, such as the newly organized cruise to Drakes Bay, and Inverness, by the Pacific Inter-Club Yacht Association.

A danger zone has been established in the Pacific Ocean northwest of the Farallon Islands where vessels are asked to stay clear. A naval aircraft bombing range has been established within a circle having a radius of 2.5 nautical miles with its center on Fanny Shoal, latitude 37° 49' 45", longitude 123° 17' 45", approximately 2.9 nautical miles northwesterly of Noonday Rock, 12.4 nautical miles northwesterly of Farallon Light, and 13.9 nautical miles southwesterly of Point Reyes Light.

## ***San Francisco Bay***

with its series of connecting bays, has a length of about 40 nautical miles and widths of from 3 to 10 miles. It has a shore line of more than 200 miles and a water area of about 450 square miles. Although most of the bay is suitable for shallow draft navigation, there are considerable areas of tidal flats drying at low tide. The daily range of the tide is about 6 feet and the most extreme range is about 11 feet.

The approaches to the Golden Gate are through the Gulf of the Farallons, which is about 35 miles long in a northwest and southeast direction, with a greatest width of 23 miles. In approaching the entrance, Point Reyes, Mount Tamalpais, the Farallons, Point San Pedro, and Montara Mountains are all prominent in clear weather.

Outside the entrance to the Golden Gate is a semi-circular bar extending from a point  $\frac{1}{2}$  mile westward from Point Bonita to a point nearly one mile offshore and 3 miles southward from Point Lobos. The extreme outer point of the bar is  $5\frac{1}{2}$  miles southwest from Point Bonita. The northern point of the bar is shoalest and is known as Four Fathom Bank. The depths over the remainder of the bar range from 31 to 36 feet.

Golden Gate is reached by three channels—the Bonita Channel, which parallels the coast north of Point Bonita; the main ship channel, which crosses the bar and enters the Golden Gate from a southwestward direction; the south channel, which parallels the coast south of Point Lobos. The main ship channel is the one most generally used. This has a width of  $\frac{3}{4}$  of a mile and is a little over  $\frac{1}{4}$  of a mile long between

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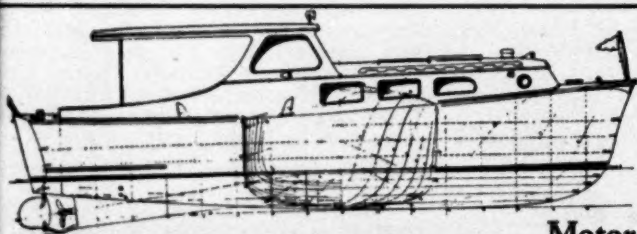
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the outer and the inner 61 fathom curves. The controlling depths are 54 feet in the Bonita channel, 35 feet in the main channel, and 35 feet in the south channel. The depths through the Golden Gate are more than sufficient for navigation by the largest vessels.

North of the Golden Gate the natural channels have ample depth for the biggest yachts into San Pablo Bay, and a dredged channel in this bay affords passage at low water for boats drawing up to 29 feet to Mare Island Navy Yard, and through Carquinez Strait. A channel for smaller yachts also extends from the bay into Petaluma Creek, where bass fishing abounds. Except for these channels, the water in the bay is generally shallow.

The principal communities on the western side of San Francisco Bay proper are San Rafael, Sausalito, and Tiburon, north of the entrance, and San Francisco, South San Francisco, San Mateo, and Redwood City, south of the entrance. On the eastern side of the bay are Alameda, Oakland, Emeryville, Berkeley and Richmond.

The City of Vallejo at its extreme eastern end lies partly on the Napa River. The Mare Island Navy Yard is located on San Pablo Bay and immediately across the Napa River from Vallejo. It is at the latter town that the Vallejo Yacht Club maintains a spacious clubhouse, with facilities for obtaining water and fuel. It is centrally located to the town of Vallejo where other marine supplies may be obtained.

Northeasterly from the St. Francis Yacht Club, and at a distance of about 7 miles, is the Port of Richmond. The city has a waterfront of approximately  $7\frac{1}{2}$  miles extending from Point San Pablo to Point Isabel, near the Contra-Costa-Alameda boundary line. It is in the so-called inner harbor that there are facilities for the provisioning of small boats.

Oakland and Alameda are situated on the eastern shore of San Francisco Bay, opposite the City of San Francisco.

Berkeley Yacht Harbor is located on the east shore of San Francisco Bay,  $8\frac{1}{2}$  miles ENE of Fort Point. It is on the north side of the inshore end of the Berkeley Municipal Fishing Pier (formerly the Southern Pacific-Golden Gate Ferry Pier). A measured nautical mile on the north side of the pier is indicated by striped markers.

Municipally owned and operated, the harbor berths some 300 boats up to 100

feet in length, with additional protected space for mooring. It is the home of the Berkeley and the University of California Yacht Clubs. In addition to berthing and anchorage, facilities available include dockside water, electricity, lockers (gear and dinghy), watchman and garbage service.

Privately operated land and marine gas stations, chandlery, marine railways, and hoists are within the harbor area, and available to all boat owners. An emergency crash boat is operated by the City of Berkeley on a 24-hour basis.

There are several islands of importance in the bay, notably Angel Island, northeast of the inner end of the Golden Gate; Alcatraz Island,  $1\frac{1}{2}$  miles south of Angel Island and about 1 mile north of the San Francisco waterfront; and Yerba Buena or Goat Island, lying  $1\frac{1}{2}$  miles east of the waterfront of San Francisco. Just inside the Golden Gate and south of the channel is the Presidio shoal, while directly north of North Point is Blossom Rock. These are well marked, however, and constitute no serious obstruction to navigation.

Facilities for the accommodation of yachtsmen exist mainly in the inner harbor, which consists of a tidal estuary about 7 miles long. It includes the San Antonio Estuary, the Brooklyn Basin, and the tidal canal connecting the estuary with San Leandro Bay. The westerly end of San Antonio for a distance of about 2 miles forms the entrance channel into the inner harbor and is protected by two stone retaining walls from 750 to 850 feet apart. San Leandro Bay has an area of about 440 acres inside the high water line. The bay is generally shallow and is not used to any great extent for yachting.

In the southerly part of the bay the greatest depths are near the westerly shore, and the distance between the 3-fathom curves gradually diminishes from about  $2\frac{1}{2}$  miles at Point Avisadero to about  $\frac{1}{4}$  mile at the Southern Pacific Railroad crossing at Dumbarton Point.

As the boatman enters San Francisco Bay he will observe on his starboard bow, when he has proceeded approximately 3 miles from Fort Point, the St. Francis Yacht Club. Adjacent to the St. Francis Yacht Club, is the Yacht Harbor, where the boatman may find a temporary berth, fuel, water, and other accommodations. The Yacht Harbor is under the jurisdiction of the San Francisco Park Commission.

Directly across the bay from the St. Francis Yacht Club, in a northerly direction, is the San Francisco Yacht Club.

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This club is in sheltered Belvedere Cove, a distance of about 5 miles from the St. Francis Yacht Club.

About half a mile in a southeasterly direction from the San Francisco Yacht Club is the Corinthian Yacht Club. As with the San Francisco Yacht Club, the Corinthian has a large clubhouse and float.

Up the Oakland Estuary about 8 miles from San Francisco, at the foot of 19th Avenue, is the Oakland Yacht Club. Here are maintained all necessary facilities for servicing yachts with a commodious yacht basin, and a club house.

The Aeolian Yacht Club is located on San Leandro Bay at the south end of Alameda. Here is a well equipped yacht harbor, with all necessary supplies available, and a commodious clubhouse.

Boats may proceed to the mouth of Alviso Slough, on which is located the South Bay Yacht Club, near the town of Alviso. A clubhouse is maintained here, with fuel and water available.

North from Alviso and the South Bay Yacht Club, on the western shore of San Francisco Bay, about 30 miles from the St. Francis Yacht Club, is located the Palo Alto Yacht Club, a well sheltered harbor, and with full facilities for servicing yachts.

There is a measured nautical mile on the Oakland estuary side of the Western Pacific Mole at Oakland. It is set with steel and concrete posts and markers, on an East-West course running from the Bay end of the mole one mile up the estuary to the Oakland Garbage pier.

The measured mile was installed by the Port of Oakland at the request of the Oakland Junior Chamber of Commerce.

There is another measured mile, which is unofficial, along the San Francisco side. It is unmarked, but stretches from the east side of the end of Van Ness Avenue to the West side of Baker street.

## ***Restricted Areas***

Mariners operating small craft in these waters should keep in mind that a number of restricted areas exist in waters adjacent to military installations and areas where military and other government craft are berthed or moored as well as seaplane landing areas. They are:

**Carquinez Strait** in the vicinity of Benicia arsenal, Benicia—Waters within 100 yards of the shore line or of the wharf.

**Suisun Bay at Port Chicago**, naval magazine restricted area—Waters in the general vicinity of the shoreline at Port Chicago.

**San Pablo Bay**—Waters within 100 yards of the shore line or general installations at the Mare Island Navy Yard.

**Alcatraz Island**—All the waters within 200 yards of the shore line of Alcatraz Island.

**Submarine operating area north of Alcatraz Island**—A rectangular area lying due north of Alcatraz I. and south of Angel I. is used intermittently by submarine. A patrol boat will warn passing vessels.

**South San Francisco seaplane landing area**—This is an irregularly-shaped area lying in the vicinity of South San Francisco and the S. F. municipal airport and extending more than a nautical mile offshore.

**Alameda seaplane landing area**—Certain waters lying south of the naval air station at Alameda. Watercraft may pass through the northerly part of the seaplane restricted area in a channelway 800 feet wide adjacent to the southerly side of the breakwater, protecting the turning basin at the Naval Air Station, turning at the western end of the breakwater, in a northwesterly direction, and connecting with the channel to the turning basin.

**Naval Air Station, Alameda** — The waters of San Francisco Bay within 100 yards of the Naval Air Station, Alameda, which is closed to navigation; and the waters of the entrance channel to Oakland Inner Harbor (San Antonio Estuary) between the westerly end of the rock wall on the south side of the channel and the easterly boundary of the channel, which is open to ordinary navigation only. Mooring alongside wharves on the Oakland side of the channel is permissible.

**Molate Point Naval Fuel Annex**—An area in the vicinity of this point is closed to ordinary navigation.

**Pinole Shoal Channel, San Pablo Bay**—The use of this channel is reserved for vessels drawing more than 20 feet.

## ***Sausalito***

is situated some two miles northeast from the Golden Gate Bridge. Picturesque Sausalito has much to offer the boatman. First to be sighted as the boat-



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man traverses the Sausalito waterfront is a modern and able boat yard. Here are located boat repair facilities and marine ways.

A half mile further on the waterfront is located the old building of the San Francisco Yacht Club, now being occupied by the Sausalito Yacht Club. In this building is located a bait and tackle shop, where sport fishing gear may be obtained, and where fishing parties may be arranged.

Still further along is the Sausalito Yacht Harbor, where is berthed a large fleet of yachts. This facility is operated by well-known shipbuilders.

Next to be sighted by the boatman as he cruises northeast along the waterfront is another yard where are located complete facilities for new construction and repairs to boats, engine installations, and repairs, fuel and lubricating oils.

Other facilities follow, where new construction and repairs can be undertaken.

To the north is a large establishment where new construction in both steel and wood is undertaken, as well as all kinds of boat repairs, engine installations and repairs. The company has a marine filling station providing marine fuels, diesel oil and gasoline and marine lubricants.

### ***San Rafael***

is located at the head of navigation on San Rafael Creek, a small tidal stream about 2 miles in length. The creek is improved by a dredged channel 100 feet wide and 8 feet deep across the tide flats in San Francisco Bay to the mouth of the creek, and by a channel 60 feet wide and 6 feet deep from the mouth to Erwin Street in San Rafael.

There are two yacht clubs which make headquarters in San Rafael: the San Rafael and Marin Yacht Clubs.

### ***Belvedere Cove***

lies about 3 miles easterly from Sausalito, at the southern end of the Tiburon Peninsula. Approaches to the cove are in deep water, and depths within the cove range between 2 and 16 feet.

Two of the largest yacht clubs in San Francisco Bay are located here—Corinthian and San Francisco. Other moorages and terminals enhance its importance. Water and petroleum products are available.

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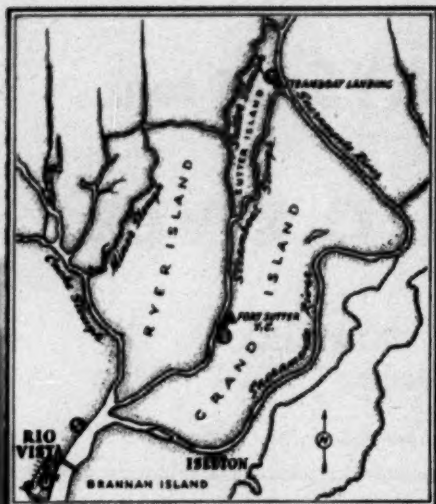
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### **Pittsburg**

is the location of a yacht and general boat repair harbor. There is a harbor consisting of approximately three square acres of harbor space dredged to a 21-foot depth. Ways are large enough to accommodate fishing boats and yachts. Adjoining the harbor is a 60 by 120-foot concrete machine shop complete with lathes, milling machines, shapers, pressure drills and many other small tools.

### **Rio Vista on Steamboat Slough**

is one of the most important cruising areas on the lower Sacramento River Region. It is the mecca for most cruising yachts during the hot summer season.

Rio Vista, a small river town, is approximately 60 miles northwest of San Francisco. Here are both public and private yacht mooring facilities, gasoline and diesel fuel, fresh water, marine supplies and repairs, ice, and groceries.

Three miles above Rio Vista is the entrance to Steamboat Slough, a wooded, picturesque rendezvous for yachtsmen, the scene of an annual Pacific Inter-Club Yacht Association cruise. Three and seven tenths miles up the slough, and behind a sheltering island, are the private moorings of the Fort Sutter Yacht

Club. Here are available Standard Oil marine fuels and lube oils. Draft of vessels is limited to four and a half feet at mean low water entering the cut leading to the yacht club facilities. Here will be barbecue and other facilities for visiting yachtsmen.

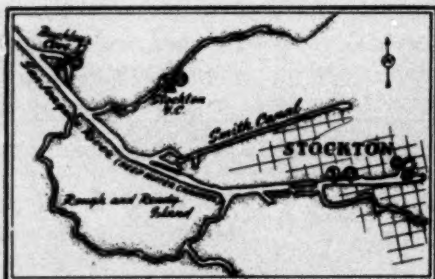
Continuing seven miles from the Fort Sutter Yacht Club is Steamboat Landing, where yachtsmen leave their boats all summer and spend vacations and week ends aboard. Here are groceries, fresh water, and gas and oil.

### **Stockton**

is the metropolis of the San Joaquin River delta, located 40 miles above the river entrance to Suisun Bay. It is an important boating and yachting center and an up-river terminus and rendezvous for many San Francisco Bay boatmen. Calaveras River joins the channel to the north.

Entrance from the Pacific is made through the Golden Gate into San Francisco Bay, sailing north and eastward through San Pablo Bay into the Carquinez Strait, which connects San Pablo Bay with Suisun Bay, to the mouth of the San Joaquin River. The boatman proceeds up this river to the city of Stockton, a distance of forty miles.

An anchorage is provided by the Stockton Yacht Club. The Yacht Club harbor is located at Smith's Landing, one mile up the Calaveras River. The Club offers the hospitality of its moorings to all yachtsmen who visit the inland city from downriver points. Fuel stations and all regular city facilities are available to visiting boatmen. Fishing, hunting, boating and other information of any of the streams in the San Joaquin delta can be secured from the Stockton Chamber of Commerce.



STOCKTON



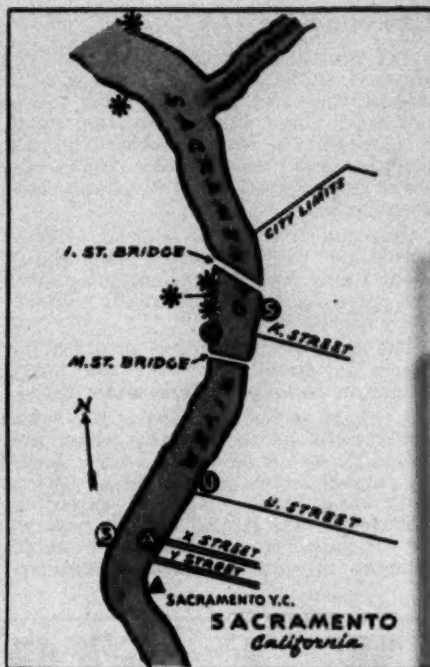
The Ionic Sailing Club now possesses a floating clubhouse that is anchored in Buckley's Cove adjacent to the Stockton deep water channel and 5 miles west of Stockton. The club does not have any berthing facilities but has an excellent harbor for mooring. Also located here is a small boat yard, a city-owned boat launching ramp, and a boat mooring and berthing area.

Emergency supplies of gas and oil can be picked up at Venice Island on Little Connection Slough at Hesman & Helen's.

## Sacramento

Capital city of California, Sacramento is rapidly coming into her own as a popular boating center. Many new facilities accommodate a growing local fleet and the many visiting craft.

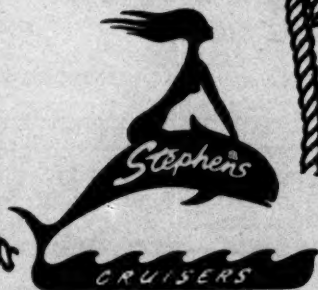
Sacramento is located on the bank of the Sacramento River below the mouth of the American River and about forty miles from the river delta into Suisan Bay.



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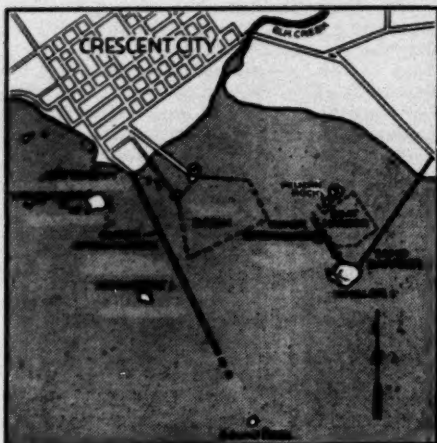
## ***Crescent City***

is the northernmost California port offering facilities for motor boats, is situated on the north side of a small rocky bay about three miles S. E. from Point St. George. The city is located on the Redwood and Oregon Coast Highways, about fifteen miles from the California-Oregon border.

Crescent City harbor is a small crescent-shaped bay open to the south and is about 1 mile long and one-half mile wide. The outer and inner harbors are protected by breakwaters.

The approaching mariner should carry charts to direct him over the many dangerous rocks above and under water.

A wharf is built out from the town and vessels moored off the wharf are loaded by means of cranes on the dock; the largest crane is capable of lifting 10-12 tons. Small craft not exceeding this weight are hauled out for repairs, etc. Repairs to machinery of small launches only can be made. A consider-



**CRESCENT CITY**

able number of fishing vessels use the harbor and avail themselves of the wharf facilities.

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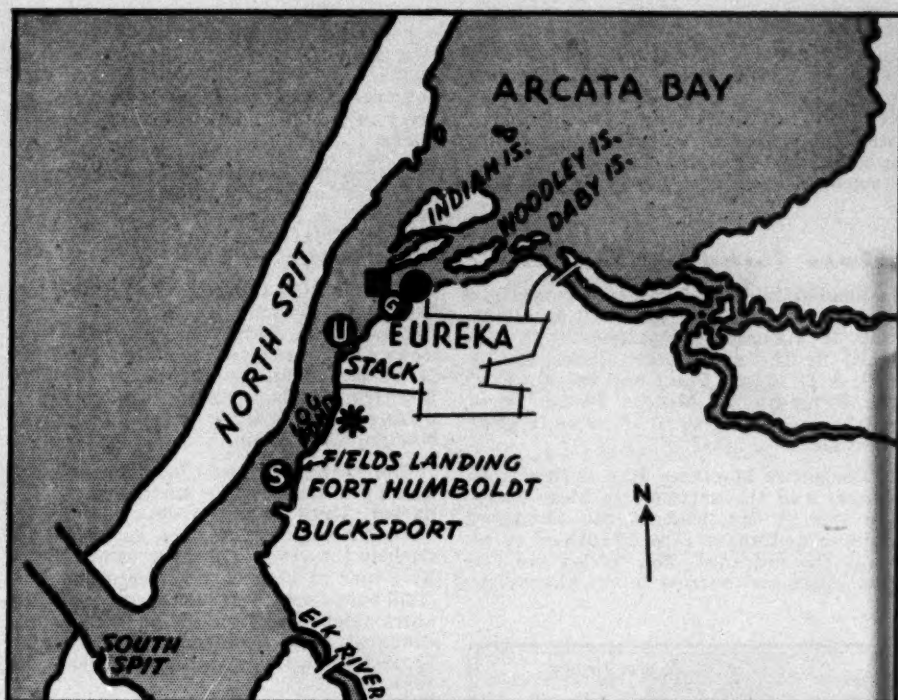
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EUREKA

### **Eureka**

is the principal shipping point on Humboldt Bay. The harbor is land locked on the coast of California, 206 nautical miles and 60 miles south of Crescent City. Eureka is reached through the bay from the main channel, through an almost straight natural channel which has been improved by dredging.

Visitors should contact the Coast Guard Base when attempting to cross the bar in heavy or rough weather. When entering in fair weather with a heavy craft, come in on the slack flood or low ebb, it is advised by local mariners.

The Humboldt Yacht Club has been forced to vacate its clubhouse and have not yet found a suitable site to rebuild. They have, however, installed a launching ramp at Eureka's proposed new waterfront recreational area, adjacent to the small boat basin. Gasoline, oil, fresh water and ice may be procured adjacent to the Yacht Club. Most of these facilities will be open seven days each week. Union, Standard, Mobiloil, Signal, Shell and Texaco stations serve visiting craft.

### **Noyo (Near Fort Bragg)**

is 33 nautical miles north of Arena Cove and about 89 miles south of Humboldt Bay. Despite headlands the harbor is exposed to ocean swells. The occasional storms from the southeast to southwest are considered the most dangerous to small craft. Improvements authorized call for breakwater 1100 feet from south headland and an entrance channel into Noyo River 10 feet deep and 100 feet wide, extending to highway bridge. Another half-mile extension is recommended, and the state is relocating highway.

### **Bolinas Bay**

a minor Coast Guard station, it is about 10 nautical miles north of the Golden Gate. Bolinas Bay is an open bight  $3\frac{1}{2}$  miles long and  $\frac{1}{2}$  mile wide, and affords shelter in northwesterly weather. The shallow Bolinas Lagoon is separated from the bay by a strip of sandy beach that is cut by a narrow shifting channel near the bluffs about the middle of the bight.

## Half Moon Bay

the northern arm of Half Moon Bay lies east of Pillar Point, 19 nautical miles south of the entrance to San Francisco Bay. Partial protection from northerly storms is afforded. Water and petroleum products are available for small craft at Princeton, a fishing village on the bay.

## Moss Landing Harbor

is located midway between Santa Cruz and Monterey on the shores of Monterey Bay. It is easily distinguished from seaward by the six smoke stacks of the P.G. & E. Steam Plant and the stack of the Permanente Metals Plant. These marks are visible 12 to 15 miles in good weather.

The entire Monterey Bay is free from danger and the entrance to Moss Landing lies at the head of the Monterey Submarine Canyon. The 50 fathom curve is at the entrance. The jetties are 600 feet apart and narrow in the channel to

400 feet. The channel itself is 200 feet wide on the bottom and the water is not less than 15 feet at mean lower low water. A lighted bell buoy marks the entrance and both courses of the channel are marked with range lights as well as buoys.

The harbor consists of two arms, one south and one north of the entrance. At present only the south arm has been developed. The harbor is land-locked and safe in all weather.

Standard Oil Company and Union Oil Company provide fueling facilities. Light, power, water, ice, general provisions and stores are available. Mooring is congested and is in charge of John Woolsey, Harbor Master. There are 5 piers on the westerly side of the inner channel yacht club.

The Elkhorn Yacht Club is now located on the inaccessible north arm of the harbor. Until proposed development occurs, visiting yachts are requested to stop at the Union Oil dock which is the first pier to starboard on entering. The club house can be reached by long distance telephone through the Watsonville exchange. It is reported that a dredging project in the north arm is planned for 1951.

## Santa Cruz

is located on the northern shore of Monterey Bay and has an open-ocean outlook, where the California coast curves to the eastward. The famous Sequoia forest of giant Redwoods is in this vicinity.

Entering the harbor in good weather is not difficult, but with northwesterly winds a heavy swell sometimes sweeps around Santa Cruz Point and into the bay. In southerly weather there is no protection, and vessels are obliged to leave port.

The municipal wharf extends 2,745 feet out to the depth of 31 feet at low water. The city maintains a public landing, free to all visiting and local guests, from March to October. In winter the float is hauled up on the wharf.

Oil, gasoline, water, ice and general supplies can be obtained at Santa Cruz.

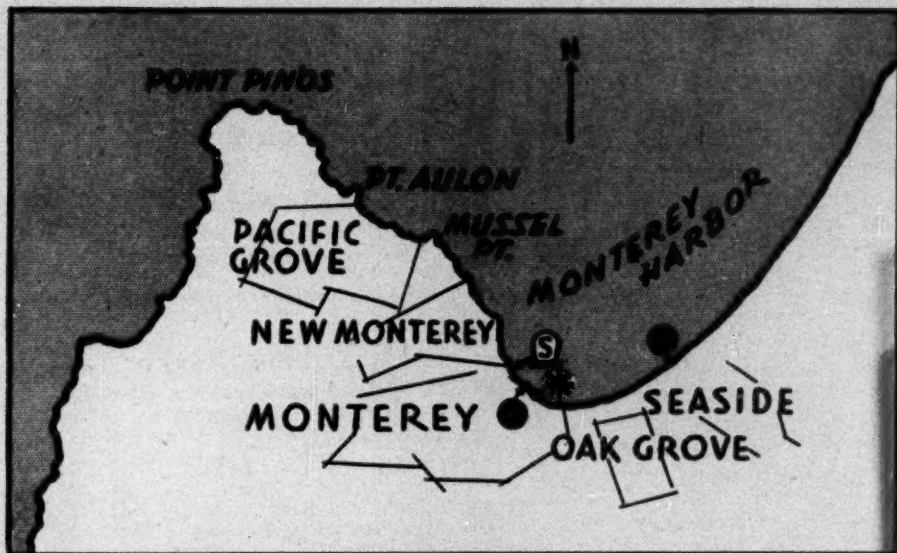
Repair shops and shipyards are in the vicinity of the harbor.

Santa Cruz is a popular beach resort and yearly attracts hundreds of visitors to its scenic harbor.



MOSS LANDING HARBOR





MONTEREY

## Monterey

is a broad open roadstead, 20 miles long and 9 miles wide, lying between Point Pinos and Point Santa Cruz—its southern and northern extremities. A prominent feature from seaward is the low sandy shore, backed by sand dunes or low sandy bluffs, and extending eastward from about the middle of the Bay, which forms a break between the Santa Lucia mountain range southward, and the high land of the San Francisco Peninsula northward.

The Bay is free from dangers, the ten-fathom curve lying at an average distance of three-fourths mile off-shore; the lead is a guide in thick weather.

A submarine valley heads near the middle of the bay with a depth of over fifty fathoms about three-eighths mile from the beach, near Moss Landing, on the eastern shore.

Santa Cruz Harbor and Soquel Cove offer shelter from the northwesterly winds, and Monterey Harbor from southeasterly winds.

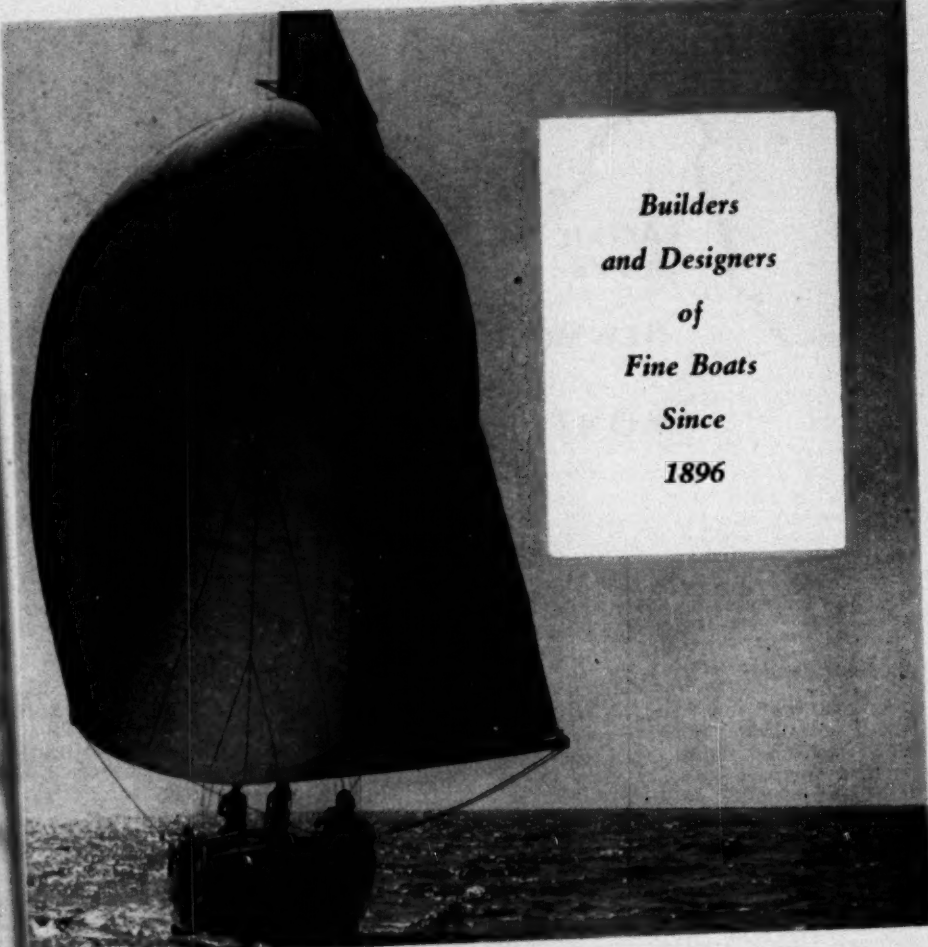
There are two commercial wharves; the municipal is built out in the southernmost part of the bight to a low water depth of 25 feet; the oil wharf,  $\frac{1}{2}$  mile nearer Point Pinos, with 36 feet alongside, is used by large vessels loading fuel oil. In case of heavy westerly

swells, vessels at the dock must be breasted off, mooring buoys being provided for this purpose. There are two wharves eastward of the steamboat wharf which are used by fishermen and bathers, and are available for motor boats.

Gasoline, diesel oil, lubrication and fuel oils are obtainable. There are gas stations on the wharf. Several marine supply stores and boat yards are also here. All kinds of provisions for boatmen are available. Fresh water is piped to all the wharves. Ice and bait in abundance is provided for fishing boats by plants along the waterfront.

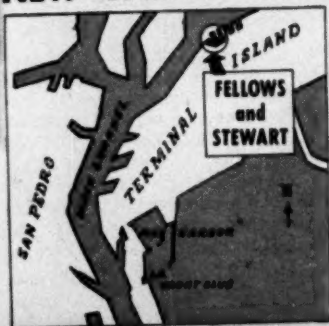
Monterey has the nation's largest sardine fishery and is one of the most important fisheries locations on the Pacific coast. Monterey is an old Spanish town, rich in historical interest. The old Custom House, the Governor's home and the house occupied by Robert Louis Stevenson still stand. An old Spanish mission is in the town, and that of Carmel is a few miles to the southwest.

Visitors to "Old Monterey" should not miss the Del Monte Hotel with its beautiful grounds and shops. A polo field and fine golf course are its other attractions. The famous Seventeen-mile drive to Cypress Grove and Point Lobos, including a visit to the old Carmel Mission, (and art colony nearby) are pleasures long to be remembered.



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# SOUTHERN CALIFORNIA

## *Harbors*

**A**LTHOUGH the coast of California is generally rugged and mountainous, there are numerous bays and shallow tidal basins which offer harbors of refuge for small boats.

The larger harbors include San Diego, Newport, and Los Angeles-Long Beach, although there are many fine small harbors being developed to accommodate the rapidly-growing Southern California fleets.

There are few shoals or dangerous reefs off the Southern California coast. The principal islands offshore are the Santa Barbara group. The most-visited is the world-famous Santa Catalina Island, 21.7 miles offshore from Los Angeles, which offers a year around playground for yachtsmen. Cruises are also made to other of the offshore islands.

Because of the mildness of the climate, boats are never laid up in the winter time. However, the rainy season begins about November and continues until April, and few ocean cruises are made at this time. From May until Christmas the Southern California yacht clubs have a crowded schedule of events and cruises.

The largest ocean sailing yacht race in the world, in regard to the number of boats participating, is the race from Newport Harbor to Ensenada, Mexico, which has become an annual event, in

May. The longest ocean race in the world, the Transpacific Race from Los Angeles to Honolulu in the Hawaiian Islands, is held on the odd-numbered years.

A detailed guide to waters of the California coast is the information pamphlet published by the office of the division engineer, South Pacific Division, Oakland Army Base, Oakland, California, entitled, "Small-boat harbors and shelters, Coast of California."

Twenty danger areas have been established near the coast of Southern California, in the vicinity of the southern California islands. These areas are designated as firing or danger areas and may be used regularly or intermittently. "Notice to Mariners" issued by the district commander, 11th Coast Guard district, carries regular announcements on the active use of these areas, and are described in detail in notice No. 32-50, July 28, 1950, and following.

There are three offshore danger zones in the vicinity of Point Fermin, White's Point, and Point Vicente. When firing is in progress safety observers will be maintained to warn all vessels.

Any inquiry about these danger and firing areas should be addressed to the Commandant, 11th Naval District, San Diego.

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## *Los Angeles*

is ideally situated and its fine sheltered Harbor is fully equipped to meet every need of the yachtsman and small boat owner.

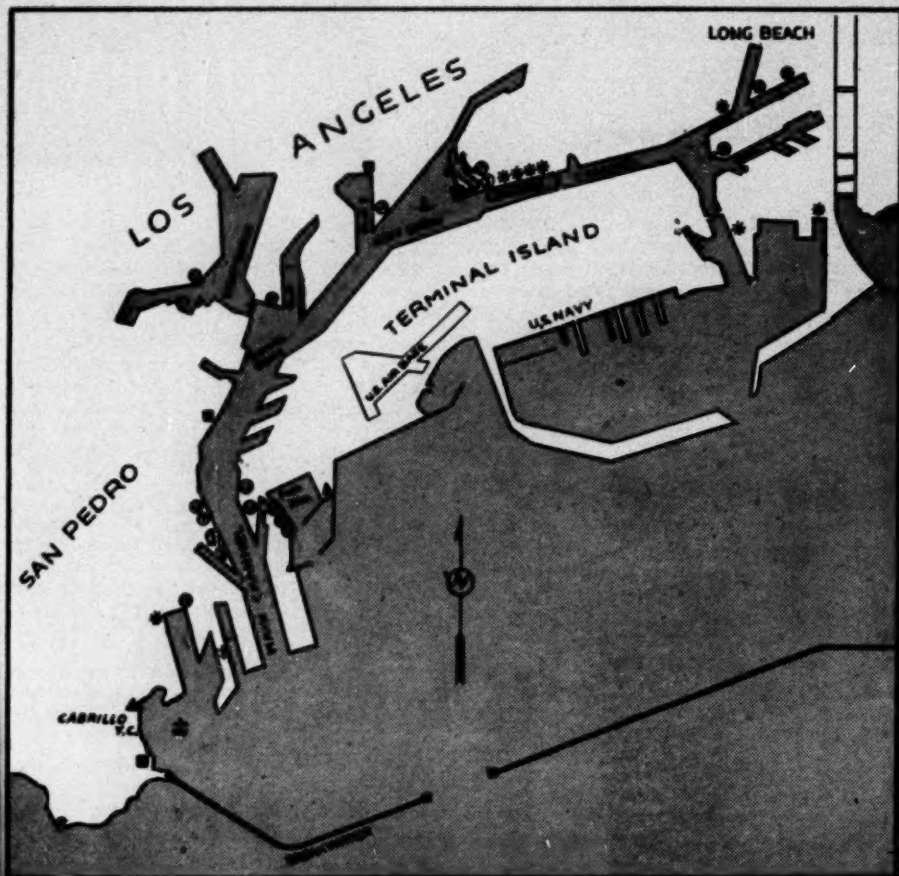
In approaching San Pedro Bay, each entrance to the breakwater is marked by a lighted sound buoy (no specific navigational information.)

All classes of vessels, both inbound and outbound, should pass these buoys to port. Vessels should shape courses to approximately north or south before passing buoys and proceed at speeds no greater than is necessary for steerage while negotiating the entrances.

A hazard is the separation of ocean and inland boundaries right at the breakwater. Vessels exchanging sound signals there may only confound a collision situation.

Vessels en route to Newport and not desiring to go out and around the approach buoy may, of course, run inside the harbor to an exit at the eastern extremity of the new breakwater toward Seal Beach.

During the last few years, vast improvements have been made for the yachtsman in the East Basin, where tidelands were reclaimed by filling to provide large car parking areas and sufficient frontage to moor in excess of 600



### LOS ANGELES AND LONG BEACH

yachts. Small boats may also anchor in the Outer Harbor area adjacent to Cabrillo Beach. There are a number of yacht landings to serve the boat owner.

The Cabrillo Beach Yacht Club has a clubhouse at the foot of Miner street in San Pedro. There is a pier with a hoist and an electric winch with a capacity of 2000 pounds available for launching small boats.

The Los Angeles Yacht Club is located on the mole at the foot of Barracuda Street, Terminal Island, Los Angeles Harbor. The club maintains an anchorage, a clubhouse, lockers for yachting gear, equipment for lowering and lifting small and medium-size sailing boats and yachts from the water, and has space available for the storage of small boats and the parking of automobiles. Yachtsmen frequently have the courtesy of the club facilities, along with the Los Angeles Yacht Club membership, for spe-

cial regattas and yacht races and for entertainment within the clubhouse. Two or three moorings are available to visiting yachtsmen which may be reserved by prior telephone call to Burdick H. Eaton, Port Captain, Dunkirk 3-1901. The anchorage is undergoing extensive dredging, as a result of which all moorings have been laid on the dock, and the exact date on which the club will again be in commission has not yet been established.

There are two public landings in Los Angeles Harbor, one located at the foot of Avalon Street in the Wilmington District at Berth 186, and the other at the foot of First Street in the San Pedro District at Berth 89, as well as the Cabrillo Beach pier at the foot of Thirty-eighth Street, San Pedro. There are ample parking facilities for the parking of automobiles adjacent to each of these locations.



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Several small boat building and marine repair yards are maintained in Los Angeles Harbor as well as marine equipment stores.

Cerritos Channel is spanned by two bridges, the Commodore Schuyler F. Helm highway bridge, and the Henry Ford (Badger) Avenue railroad and highway bridge approximately 130 feet westerly. From 7:30 a.m. to 8:00 a.m. and from 4:30 p.m. to 5 p.m., except Saturdays, Sundays, and holidays, the draw of the Commodore Schuyler F. Helm bridge shall not be opened for the passage of vessels except in case of emergency. The draw of the Henry Ford Avenue bridge shall be opened with the least possible delay at any time on receiving the prescribed signal, two short blasts followed by one long blast. The call signal for opening both bridges at one time is three long blasts.

The Commodore Helm bridge is a lift span for highway traffic, horizontal clearance at center 180 feet, vertical clearance above m.h.w. 52.9 feet. The Henry Ford bridge is a double leaf bascule for railway and highway traffic, horizontal clearance 180 feet, vertical clearance above m.h.w. when closed, 12 feet.

Boats can enter Los Angeles Harbor via the Main Channel and the East Basin Channel and reach the sea by sailing through the Cerritos Channel and out the Long Beach entrance, or vice versa.

The strategic location of Los Angeles Harbor makes it ideal for a cruise to any point in the Pacific Ocean, and affords the small boat owner the advantage of making trips to the romantic islands off the California Coast: Catalina Island, the Santa Barbara Islands, the San Clemente Islands, and others not too far distant for small boats.

Many yacht races center in Los Angeles Harbor annually, such as the San Clemente Island Race, the Around Catalina Race, the Southern California Midwinter Regatta, the International Star Boat Championships, and the start of the Honolulu Race.

There are two restricted areas in the vicinity of Terminal Island. One is a

seaplane landing area 525 yards wide running from the dredged channel to Fish Harbor to the Long Beach Harbor entrance channel. The other is the fleet operating base, including all waters between the Navy mole and Terminal Island to the westward of 118°13'10".

## **Long Beach.**

California's newest major port, has taken its place among the leading ports of the United States. The outer harbor has been developed from a sandy beach to a major port, while the development of the inner harbor which was taken over by the City of Long Beach in 1916, is being continued at an accelerated pace. At the present time the port has a \$100,000,000 development program within 20 to 25 years.

The port is principally a commercial harbor catering to vessels of the 10,000 ton class. There are three private yacht landings in the Port of Long Beach. They are located at 1700 West Ninth Street, 1500 West Eighth Street, and 1550 West Seventh Street.

There is a public launching ramp for small boats located at the foot of Golden Avenue. This has proved a great boon to the small boat owner with a trailer. Another major accomplishment of the city has been the completion of the Magnolia Avenue Pier located at the foot of Magnolia Avenue. All of the facilities are not yet in. However, space will be provided for scenic excursion boats, sportfishing, rowboats, speedboat rides, and pier fishing.

With the future development of Alamitos Bay, small craft will be provided with an outstanding protected harbor, anchorage, and marine service.

The call signal for opening the draw on the pontoon bridge at the entrance channel to Long Beach inner harbor is one long blast followed by two short blasts. This signal shall be acknowledged by two long blasts followed by one short blast when the draw can be opened immediately, and by two long blasts when the draw cannot be opened immediately.

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## SANTA MONICA

### ***Santa Monica***

affords the only protected shelter between Port Hueneme and San Pedro. This harbor is the nearest ocean point to the center of the city of Los Angeles and survey shows it to be the closest point to the residential section of the majority of Los Angeles County yachtsmen. Its famous white sand beach is one of the most used in the southland. Many beautiful homes owned by the motion picture colony are built on the beach and on the bluffs above.

When entering the Harbor from the east end, all vessels must proceed with caution in passing the heads of the docks and observe the speed limit imposed by port authorities.

The breakwater parallels the shore and is 1800 feet off shore. The harbor has moorings and storage spaces for all. A Harbor Guard is always on watch

to insure protection and service to boats and owners.

Information relative to the Yacht Clubs and Associations can be obtained from the Harbor Office on the end of the Municipal pier. The Yacht Club float and landing is located on the northwest side of the pier.

Gasoline, diesel oil, lubricants and rock gas can be obtained in any quantity. Boat yards and ship chandleries capable of rendering complete repairs are located on the Santa Monica pier.

Santa Monica is a recognized boat anchorage and no night lights are required on boats up to 65 feet.

The Malibu Yacht Club is located at Paradise Cove, known on the charts as Dume Cove, just in the lee of Point Dume. This is 18 miles N. W. of the city of Santa Monica, just east of Malibu, Calif. A Shell marine station (location not shown on the accompanying map) is also located at Paradise Cove.

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## Morro Bay Harbor

is a landlocked bay which lies almost midway between San Francisco and Los Angeles Harbors. It affords excellent protection in any weather. The entrance channel is 16 feet deep and 350 feet wide, and it is advised to make a straight-in approach during heavy weather.

Limited supplies are available. Although there are no marine service stations, gasoline is available to vessels drawing less than 6 feet. Diesel fuel is not available locally. There is a way for vessels up to 40 feet and facilities for making boat and engine repairs.

## Santa Barbara

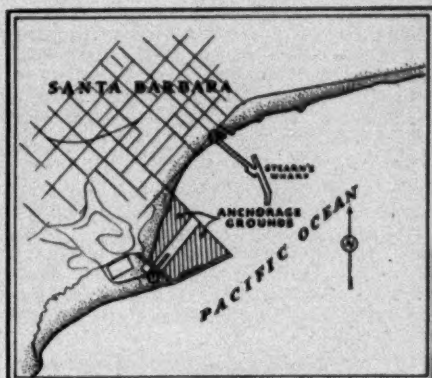
is situated on Santa Barbara Channel, facing south. It is northeast of La Vigia Hill, forty miles east from Point Conception and thirty miles west-northwest from Point Hueneme. The islands of Santa Cruz, Santa Rosa, San Miguel and Anacapa lie across the channel, about 25-35 miles to the south.

La Vigia Hill, 592 feet high, is the distinguishing feature when approaching from the east or west. Santa Barbara Point is a high cliff and the eastern limit of a narrow tableland upon which Santa Barbara lighthouse is located. Goleta Point is six and one-half miles west of Santa Barbara Point and is low and terminates in a 30-foot high cliff. Point Conception, a bold headland 220 feet high is found at the west end of Santa Barbara Channel.

At the present there is harborage for some 300 boats.

Persons living in the Westwood-Beverly Hills sector are finding the Santa Barbara "drive" an easy one to their boats.

Limited facilities, to be improved and augmented, include Stearn's wharf, Navy pier (partially available to the city), a float for small craft landing and mooring spaces for small pleasure craft. The moorage is generally crowded, and more



SANTA BARBARA

space is dependent upon additional dredging.

Facilities of supply are generally available at Santa Barbara.

## Port Hueneme

situated on the southern California coast at the southeast end of the Santa Barbara Channel, is one of the newest man-made harbors on the Pacific coast. It is 59 miles northwestward of Los Angeles-Long Beach Harbor and 28 miles southeastward of Santa Barbara. It is contiguous with Hueneme and within a few miles of Oxnard and Camarillo, agricultural communities of the district.

The entrance is bounded by an east and west jetty, the former running southward and the latter southwestward.

Port Hueneme is still in the hands of the Navy with the exception of the small portion known as Dock One. Use of Dock One is almost entirely commercial. Fish are landed and a few sports fishing boats are allowed to operate. It is stated that room is limited and the harbors use by pleasure craft is frowned on except in case of bad weather or other emergency.

A danger zone has been established in

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Port Hueneme, to include the waters of Anaheim Bay Harbor between the east and west jetties at the U.S. naval ammunition and net depot at Seal Beach and the contiguous tidal channel and basin as far east as the Pacific Electric Railway bridge.

**The regulations:**

(1) Transit is prohibited to all but regularly documented vessels and power boats having a certificate of award number. Sailing vessels shall use auxiliary power in Anaheim Bay proper. Rowboats, canoes, landing, and stopping except in actual emergency are specifically prohibited.

(2) All boats shall proceed as expeditiously as possible by the shortest practicable route through the danger zone. Fishing, landing, and stopping except in actual emergency are specifically prohibited.

(3) Passage shall be made only upon the express permission of the depot duty officer in each instance, date and time of expected return to be given. Per-

mission should be obtained not less than one hour before seaward transit. Day-time passages are recommended.

(4) All craft of whatever category shall have the right at any time to seek shelter in these waters because of stress of weather.

Nearly all Ventura County Boat Club boats are now moored at Santa Barbara due to lack of facilities in this port. Formerly a few boats have been moored in the open sea near the Ventura pier during the summer months. The club has met with some success with the State of California over the use of a portion of the end of the Ventura Pier for small boat launching, and permission to install a ladder and skiff has been obtained. However, the landing stage has been leased to an oil company and is not available. Anyone finding it necessary to stop at Ventura will be given all possible help by State Park employees and the Ventura County Boat Club.

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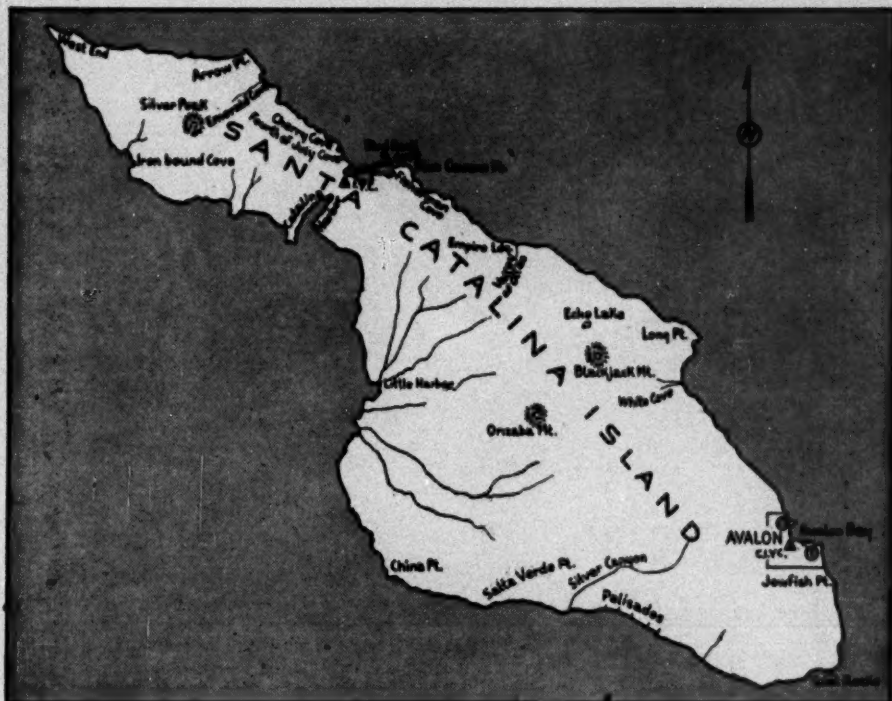
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CATALINA ISLAND

### ***Catalina Island***

is 21.7 nautical miles southward from San Pedro. It is  $18\frac{1}{2}$  miles long in an east and west direction with a greatest width of 7 miles. It is rugged and mountainous. The island rises abruptly from deep water, the 30-fathom curve lying close inshore.

Avalon Harbor is on the north side of the island  $2\frac{1}{2}$  miles from its eastern end. It is about  $\frac{1}{2}$  mile by  $\frac{1}{4}$  mile in extent, and affords anchorage in 8 fathoms, sandy bottom; there is a 20-fathom depth immediately outside the points of the cove. The shelter is good in all weather except during the winter, when rare northeasterly winds sometimes make trouble.

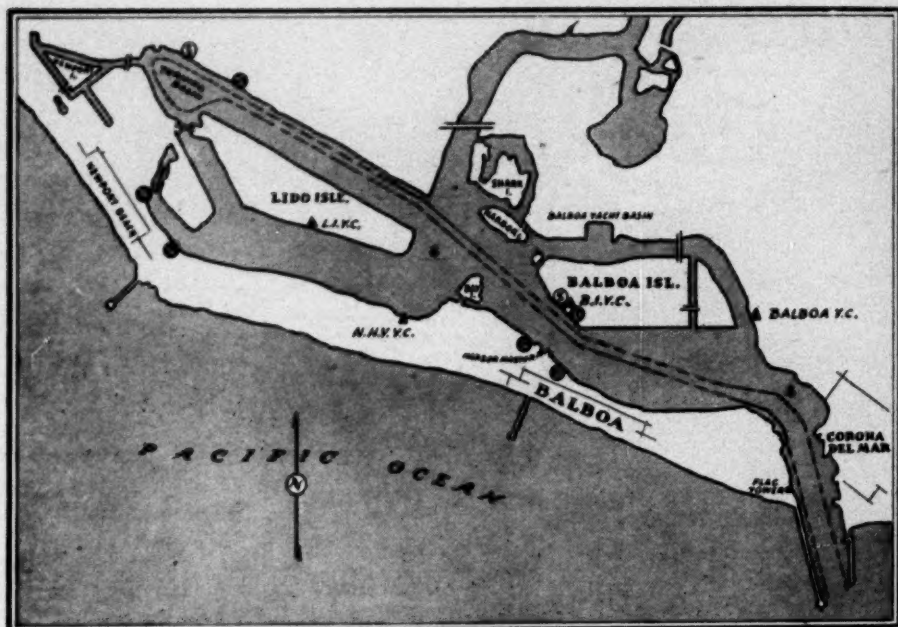
Avalon Harbor or Dakin Cove as it is more commonly known, is the favorite rendezvous on Catalina Island for all Southern California boatmen. Practically the entire harbor is available for boat anchorage and is fairly well sheltered from all but ground swells. The Catalina Island Yacht Club is located to the north of the main pier a short distance beyond the Tuna Club. A public landing dock for small boats is provided at the pier south

of the main dock. Oil may be secured at the station just south of Sugar Loaf Point.

White's Landing,  $3\frac{1}{2}$  miles westward from Avalon, affords an 8-fathom anchorage, with protection similar to that of Dakin Cove. Isthmus Cove, on the north shore 6 miles eastward from the western end of the island, affords shelter for motor boats in southerly weather but is dangerous in northwesterly. There is a landing-dock here. Catalina Harbor, on the southern side of the isthmus separating it from Isthmus Cove, affords shelter for motor boats except in southerly weather. It is funnel-shaped, about  $\frac{1}{4}$  mile long. It is free from hidden dangers and easy of access.

Situated as it is and recognized as a true fisherman's paradise, Catalina offers the deep sea fisherman from April to October the thrill of a lifetime: yellowtail, blue fin tuna, barracuda, white sea bass and black sea bass. Marlin and broadbill swordfish through July, August, September and October; a variety of smaller fish the year around.

There is a seaplane restricted area in the vicinity of White Rock, near Avalon.



NEWPORT HARBOR

### ***Newport Harbor***

entrance is 20 miles distant from Los Angeles, Long Beach Harbor and 80 miles northwest of San Diego.

The entrance harbor is 500 feet wide. It is guarded and maintained by rock jetties. Channels and anchorage areas are indicated by suitable lights and beacons. An official harbor map will be furnished upon request to the Harbor Master or Chamber of Commerce.

Entering the inlet the course to the Newport Harbor Yacht Club may be found by following the beacons to the Balboa Turning Basin opposite the Balboa Pavilion, thence proceeding in a northwesterly direction around Bay Island, a small island filled with residences which bears dead ahead as one enters the turning basin, then shaping one's course between this island and the beacon which stands northerly of it, and turning sharply to port when between the beacon and the island. The Newport Harbor Yacht Club will be seen dead ahead and less than a quarter of a mile away. The mooring area of this club is S.E. of Lido Isle. Guest moorings and dining and cabin facilities of the club are available to visiting yacht club members for a two week period in a calendar year.

The Rhine canal was dredged and bulkheaded in 1950 to a minimum of 10 feet at mean lower low water to provide better berthing facilities for the commercial fishing vessels in the vicinity of the three canneries. The channel provides a land-locked mooring for the West Newport area and an access to the main harbor turning basin.

A channel has been dredged around Newport Island in the West Newport area, giving a depth of five feet at mean lower low water for the small pleasure boats moored around Newport Island.

Situated in the center of what is recognized as one of the world's greatest fishing grounds, this area offers the deep sea fisherman every facility for the taking of yellowtail, bluefin tuna, barracuda, halibut, and a variety of smaller fish during April to October with the best fishing for that king of gamesters, the marlin swordfish, extending through July, August and September, the latter months being the best.

This land-locked bay is a busy place. A beautiful resort, it is populated on the water by more than 4,000 boats. They run the list from steel schooners to small sail craft like the Snowbirds.

Supply and service are big business in Newport Harbor and there is everything for the boatmen—yards, marinas, stores and fuel stations.



Several dozen firms operate charter fishing fleets out of Newport Harbor for the sportsmen. Probably more famous names keep boats in Newport Harbor than anywhere else. This is because of its proximity to movieland and its residential colonies.

### **Mission Bay:**

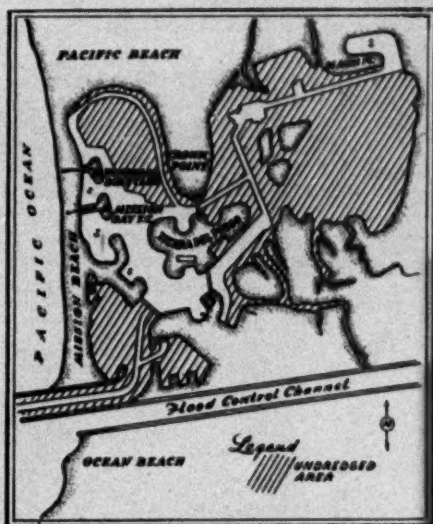
Mission Bay is a shallow tidal basin being transformed into a recreation area of nearly 4,000 acres. It is about 8 miles north of the entrance to San Diego Bay. It will be completed in 1962. A pilot channel into the bay from the ocean is now underway and dredging of a portion of the commercial basin has begun to create a 400-foot frontage for construction of piers for commercial enterprises, fishing boats and boat repair facilities.

One of the best known small boat sailing organizations on the West Coast is located on Mission Bay, the Mission Bay Yacht Club on El Carmel Point. Here, too, is the Windward Boat Club using boats built at the Santa Clara Boathouse to teach children from 12 to 17 years to sail. Dana Landing, in the heart of the bay, is the sportfishing center of the new area.

### **San Diego**

is the most southerly seaport on the Pacific Coast of the United States. The harbor widens from a narrow and rather deep channel at the entrance to a broad, shallow basin at the upper end of the bay. The bar has a least depth of 35 feet at low water, and the largest vessels enter and leave with ease.

The entrance to the port is about 10 miles north of the Mexican border.



MISSION BAY

The harbor is navigable throughout the entire year, high winds being infrequent, and fogs occurring chiefly in the winter months, generally clearing off within an hour or so after sunrise. The prevailing wind is northwest; storm winds, occurring in the winter months only, are from southeast to southwest.

The San Diego Yacht Club is located under the lee of Point Loma at the San Diego Municipal Yacht Harbor. A large area is available for boats to anchor. Gasoline is for sale at marine stations in the basin and boat building plants are nearby.

The La Playa Yacht Club is located off the foot of Qualtrough Street, Point Loma, at the head of Quiet Cove, about 600 yards S.S.E. of the San Diego Yacht

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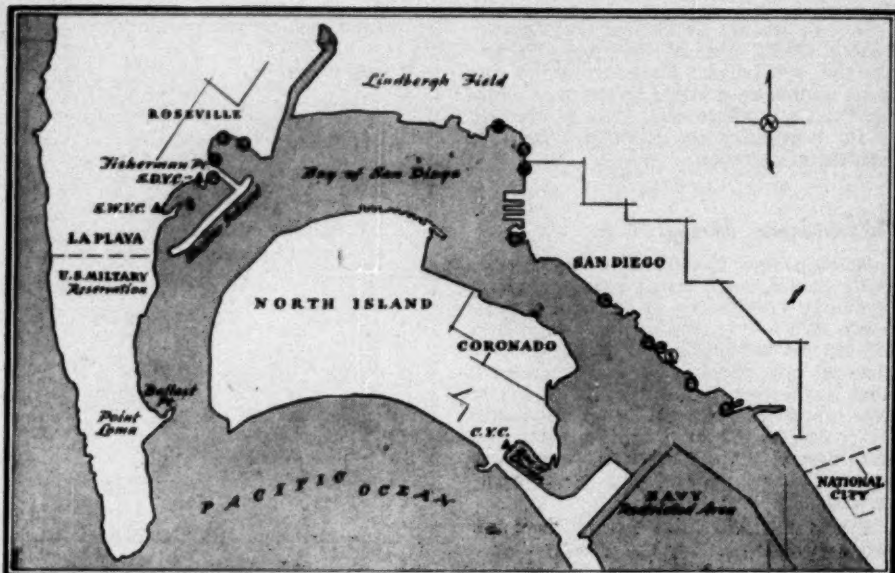
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### SAN DIEGO

Club house. The La Playa Y. C. has a wharf and a beach, but no clubhouse. The port captain lives at the land end of the wharf and will open the locked gate for the convenience of the visitors.

The Coronado Yacht Club and the Coronado Rod and Reel Club have a clubhouse, anchorage, and turning basin located at the westerly end of Glorietta Bay near the world famous Hotel del Coronado. There are facilities for restocking, water, ice, food, etc. Rooms, showers, toilet facilities are available at the Yacht Club.

All repairs to gasoline and diesel engines, electrical gear and auxiliaries may be made in port. A number of completely equipped boatyards and repair shops are located at convenient points along the waterfront. The port is noted for the building of larger types of fishing vessels and first-class yachts are turned out. All kinds of repairs to wooden hulls may be made; repairs to steam machinery and to steel hulls may be made also. All shops have marine ways.

The waters about the Coronado Islands are the surface feeding grounds of the migratory game fish such as yellowtail, tuna, marlin and broadtail.

The kelp beds formed by the giant California kelp about two miles offshore are the natural feeding grounds for a large variety of sport fish.

Big game fishermen seeking the battling marlin, broadtail and giant tuna

will find the answer to their prayers in the waters off Point Loma. From July 1st to October 1st, thousands of these gamesters are waiting to be lured. At Point Loma the city of San Diego has constructed a municipal sportsfishing pier from which two major associations dispatch day and charter boats.

San Diego Bay's 22 square miles of landlocked water is considered one of the world's finest and safest harbors. Millions of dollars have been spent to improve all its facilities to accommodate the ever-growing fleet of pleasure and commercial boats. The ultimate \$20,000,000 program is continually proceeding.

A comprehensive dredging program has been completed in the yacht and commercial fishing boat areas behind Shelter Island. The existing Byron Street Mole will be joined with Shelter Island, thereby segregating recreational and commercial facilities. Both the yacht and commercial harbors have been dredged to an overall minimum depth of minus 10 feet and a maximum depth of minus 19 feet in the channels and certain mooring areas.

Lighted buoys mark the entrance and the channel center line of the Municipal Yacht Basin. Can and nun buoys define the channel through the mooring area.

A seaplane restricted area, shown on the accompanying map, has been established by the U. S. Navy in the westerly portion of the central part of San Diego Bay, opposite National City.

## Harbors

**M**EXICO'S PACIFIC COAST extends approximately 2000 miles from Tijuana at the north to the Suchiate River at the south, which marks the border of Guatemala.

Beginning nearly at the California border is the vast peninsula of Lower California, almost as large as Italy. It is a mountainous, mineralized area of great natural wealth. The peninsula extends 800 miles southward, with its southernmost tip lying in the Tropic Zone.

Between the peninsula and the mainland lies the Gulf of California. It is the world's largest deep gulf and only the Red Sea is longer. At the southern entrance ocean depths of 11,000 feet are encountered. In 700 miles it shelves to the delta of the Colorado River, almost back to the border of the United States.

The southern half of Pacific Mexico lies well within the Tropic Zone. The weather from December to March is very pleasant and the mornings and evenings are refreshingly cool.

An indispensable cruising aid is the coast pilot published by the U. S. Hydro-

graphic Office for these waters, H. O. No. 84, "Sailing Directions for the West Coast of Mexico and Central America." Charts include Hydrographic Office No. 0621, 1006, 1149, 1193, 1310, 1493, 1636, 1664, 2103, 2193, 0872, 0640, etc.

Mexican customs fees vary from time to time. It is advisable to consult a customs broker and the local office of the Mexican consulate. The size of the vessel, number in the crew, etc., have a bearing on the charges. Necessary, for example, is a certification of a bill of health from the Mexican consul, a crew list, and three inspections at the first Mexican port of entry: health, immigration, and customs.

Pilot services at ports of entry are paid for per foot of draft.

Mexican law (Artículo No. 18) por Yates Extranjeros (foreign yachts) governs procedure of visiting boats.

It is advisable to carry enough food, fuel, and water to last from one major Mexican port to another.

Chubasco-time occurs in August, September, and October. It is wise to avoid travel in these months.

## Ensenada

on Todos Santos Bay, is the first port of entry for a vessel leaving San Diego for a Mexican cruise. There are several agents who will help you in making the necessary clearances and inspections required by Mexican law. A U. S. Consul is stationed here. It is advisable to enter or leave this port, or any other Mexican port, between 9 a.m. and 12 noon, or between 3 p.m. and 6 p.m.

Ensenada has become well known in the past few years as the terminus of the Newport Beach to Ensenada International Yacht Race, considered to be the largest ocean-sailing event of its kind. Since this is the home port of some of the largest fishing vessels in Baja California, you will find repair facilities and an opportunity to stock up on forgotten marine supplies. There is a large hotel. Of landmarks there are plenty: the lookout station on the slope above Ensenada Point; the Ensenada customhouse, a triangular building with a tower at its southwestern corner; a mill chimney 150 feet high; the cemetery at Ensenada; and the water reservoir behind the town.

A small boatyard, with marine rail-

way, located behind a 700 foot breakwater, has been built by Pesquera del Pacific, S de R.L., Mexico's largest fish cannery, located at Sauzel, eight miles north of Ensenada.

**Port Magdalena**, on the west shore of Man of War Cove, is a Port of Entry. The Port official here is collector of customs. Landing is made directly on the beach. No supplies are available.

**San Lucas**, a village on the northwest shore of San Lucas Bay on the east coast of Lower California, has a customhouse, a privately owned wharf, limited supplies, irregular steamship contact, and telegraph and telephone communication with La Paz.

## La Paz

on the east shore of Baja California, is known as one of the world's finest fishing grounds for the game species. The hotels are considered excellent, costs are reasonable and there is a growing sport fishing fleet available for charter. Fuel is available and water and the port facilities are more than adequate. Limited supplies are available. Sailfish, tuna and marlin will give you opportunity to test your fishing ability.



The harbor is  $\frac{1}{2}$  to  $\frac{3}{4}$  mile wide and the channel has a length of about  $3\frac{1}{2}$  miles and a least charted depth of  $3\frac{1}{4}$  fathoms. La Paz is the seat of government for the southern area of Baja California. There is a municipal pier and a private wharf.

Pilotage is compulsory and health inspection is required. Radio communication facilities are available.

Santa Rosalia, a mining town on the north shore of Port Santa Rosalia, is a Port of Entry. Limited repair facilities are obtainable. Supplies can be obtained. There is a government-owned radio station in town.

## Guaymas

is fast developing as a port much visited by Americans and is known for its fine sport fishing. It is the center of the shrimp industry of the Gulf of California and can provide supplies and limited marine repair services. There are telephone and telegraph connections with the United States.

There is a U. S. vice-consul at Guaymas and several new hotels. The Standard Oil company maintains a stock of diesel oil. The Southern Pacific railway built the railroad from Nogales to Guaymas, and in the spring of 1950 the highway from Nogales was completed.

Even more attractive than Guaymas itself are some of the nearby harbors and islands. San Carlos Bay, eight miles distant from Guaymas' Bocochibampo Bay, is considered to be one of the most beautiful harbors in the Gulf of California.

Topolobampo is the port of Los Mochis, an inland town with 10,000 population about 12 miles northwestward. There are limited supplies at Los Mochis and telephone and telegraph facilities are available here.

Mazatlan is the commercial center of the west coast of Mexico. It is a Port of Entry and there is a U. S. consul here. Supplies are available and repairs can be made. There are good communication facilities here.

Located in Mazatlan is the boatyard of Tomas Rueda Jr., who also maintains a towboat and salvage service, called Salvamentos y Remolques, SA.

Manzanillo is a Port of Entry. Pilots are available, and there are customs and health officials here. Limited supplies are obtainable, and there are good communication facilities.

## Acapulco

is famous for its international fishing rodeos and tournaments and is the home of the Club de Yates de Acapulco, probably the only yacht club on the west coast of Mexico. The hotels are spectacular and the scenery is equally so. Acapulco is fast becoming a rendezvous for winter-cruising American vessels from San Diego and other coastal cities.

As a harbor it is situated on the northwest side of Santa Lucia Bay and is the center of a fertile agricultural district. The town is built on a hillside. Repairs of a minor nature can be made here and supplies are available. The rainy season lasts from the end of June to the end of October. The high mountains surrounding the crescent harbor provide considerable shelter. The harbor has a width of about  $1\frac{1}{4}$  miles at the entrance, increasing to more than 3 miles inside. Corcovado Peak and the Paps of Coyuca are good marks when not obscured, generally clear early in the morning.

There are Mexican customs and health officials here, and pilots are available. Good communication facilities are available.

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O. A. Conolly.....Secretary

Boat.....Owner

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Barbara B.....Munroe Bogart

Carpy.....Walter Carpenter

Challenge.....Ted Trafton

Dodger.....Dr. Ed Dodge

Frisky.....O. A. Conolly

Grace E.....Les Bird

Jackie J.....Ken Sherman

Jo-Lynn Dr. Laurence Nicholson

Linda.....Fred Cartwright

Little Toot.....Ray Robinson

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Har-Bev.....Fred W. Hunt

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Brass Buttons.....H. C. Heal

Buzz.....Charles Blick

Chic.....H. J. (Bud) Andrews

Chickwood.....C. L. Seffrit

Comfort.....J. Koops, Sr.

Cookie.....A. G. White

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Daring.....N. Selton

DeWite.....Chas. L. Morse

Discovery II.....Leon Swank

Do-Bob.....H. W. & R. H. Diehl

Doxy.....Homer Alston

El-Com-Adee.....R. L. Wall

Ellen K.....Ernie Krumdiak

Fem.....Frank E. Wheaton

Fluid Drive.....Chas. L. Martin

Fredith.....Fred Kohler

Georgina.....Donald L. Reed

Glenda M.....W. A. Moore

Hazel M.....Roy N. Gaasland

Helen J.....M. Borenstein

Hic-N-Burp.....Alfred H. Johnson

Hi-J's.....Harold Walton

I-Hi.....Ira W. Flowers

Irene E.....Guy Elford

Jamboree.....Jesse Martin

Jester.....George Simpson

Jolly Roger.....Ralph Hannum

Judy Ann.....Clair N. Nau

Kendonmar.....Kenneth Hein

Ketcheny.....Melvin C. Shaw

Laurel.....Jules Peterson

LaVita II.....Phil Dorr

Lee Frank.....Frank Stead

Liffy.....Erick Liffvendahl

Linda Ray.....Harold Anderson

Lin Nan.....Wm. H. Lillie, Sr.

Little Women.....Carl A. Vevag

Lurline.....Earl Hawkins

Mae-Us.....Park F. Gagnon

Marena.....Oscar Olsen

Marimar.....Kenneth Morrison

Marsha.....Allan H. Pynor

Merlena.....M. Montgomery

Naiad.....James Ashe

Nautilus Dr. W. D. Kirkpatrick

Noahs Ark.....Charles Krick

Nodak.....Donald Carson

Norcar.....Norman Rogers

Patsy B II.....Curtis Brown

Pau Hana.....Stanley R. Field

Rocket.....Norman Anderson

Rossilinda.....Boi Reiman

Salbartom.....A. W. Yorkston

Sea-Legs.....Dr. S. R. Boynton

Sea Prince.....Verne DeGoller

See-Cliff.....Cliff McMillin

Segonia.....Harold Johanson

Shar-Anne.....Vere DeGoller

Shiri-Ann.....Ed Frith

Siah.....Harry Lewis

Silver Salmon.....H. Nunamaker

Skeeter.....L. P. Busch

Sky Lark Dr. Geo. Ellsperman

Solitude.....Gus Wellbrock

Su-Ju.....Elmo Hurley

Susan-A.....Al Abrahamson

Thunderbird.....Norman Borseth

Trade Winds.....Gus Wellbrock

Truant.....Boyden Spees

Tyee.....E. B. Graham

Who Cares II.....Jim Thurston

Zoea.....Dave Paradis

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Alken.....K. E. Gardner

Allanbee.....H. A. Smith

Angelica.....John L. Locke

Balew II.....Warren B. Wood

Betty Lea.....P. P. Wells, Jr.

Billy-Ell.....W. R. Lewis

Brass Buttons.....H. C. Heal

C-Bel.....W. P. Watkins

Commuter II.....A. G. Rheem

Daring.....Nuben Selton

Dewkist.....Allan H. Pynor

Discovery.....Leon Swank

Do Bob.....R. & H. Diehl

Docina.....H. A. Hansen

Ellene.....Edward L. Cooper

Ellen.....Axel Bulow

Elsie B.....Ben Hagen

Express.....A. G. Rheem

Fluid Drive.....Charles L. Martin

Flying Cloud.....Geo. N. McMillan

Fraya II.....Dr. W. A. Huibush

Gertie.....V. C. Haner

Glenda.....Wm. Moore

Gold Digger.....J. Clinton Dawson

Golden Mist.....Kay Goodman

Hazel M.....R. N. Gaasland

Intrepid.....W. P. Wood

Irene E.....Guy L. Elford

Islander.....R. R. Brown

Jabberwocky.....Douglas H. Cowling

Jeanie G.....Frank Groom

Jennie D.....R. W. Welsh

Jerlene.....Frank A. Abbot

Jo-Leen.....Joseph Jenkins

Kela.....Conrad Barker

Kendonmar.....K. G. Hein

Lar Vern.....Geo. L. Kees

La-Vita.....Phil Dorr

Len-Do.....H. L. Wellman

Loafer II.....Walter Morris

Lolita.....A. George Kren

Love O'Mike.....Dr. W. C. Moren

Lutefisk.....Dr. R. L. Taylor

Malola.....Casper U. Erholm

Marena.....O. C. Olsea

Mayfair.....Gordon Clauson

Migrator III.....H. Rolland Main

Miramar II.....K. C. Morrice

Miss Tuck.....R. R. Smith

Mudworm.....Gordon Rogers

Naiad.....Jim Asher

Nashua.....Thos. P. Nasty

Nuisance.....Dr. Leslie M. Wilkins

Nuisance.....Dr. Sheldon W. Wilkins

Patsy B II.....E. Curtis Brown

Ripple.....Rank R. Hayes

Rocket.....Norman Anderson

Salbartom.....A. W. Yorkston

Samavo.....George K. Voss

San Juanderer.....Vic Marlon

Skyark.....Dr. G. A. Ellsperman

Spunky.....G. H. Crandall

Terlin.....Wilbert Hudson

Utility.....Dr. J. P. McGregg

Vicki D.....Mal Beaver

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Dragumasey.....Roy Gaasland

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Kemah.....H. Duff Sutherland

Nautilus.....Dr. W. D. Kirkpatrick

Pau Hana.....Stanley R. Field

Prelude.....Paul H. Fordyce

Ptah.....R. O. Anderson

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Shave Tale.....Gerald P. Main

Skybaby.....Emmett Okerlund

Tacky II.....L. D. Neidham

Tagalong.....R. E. Anderson

Tom Cat.....Paul Onkels

Topsy.....Fred Elstathagen

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H. C. Huston.....Secretary

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Amini.....E. M. Haines

Anna G.....H. W. Grams

Barbara Ann.....G. O. Giblett  
 Betsy Too.....Ralph Smith  
 Billie Marie.....E. G. Rensch  
 Bob Lee II.....Robert Crawford  
 Clar Mar.....G. C. Mason  
 Conquest.....H. B. Garrett  
 Corsair II.....T. O. Barrieau  
 Daltonia.....J. E. Adams  
 Dar Jo.....C. Lund  
 Donolis.....R. J. Hart Jr.  
 Ellen G.....Theo Chrey  
 Elsie C.....E. V. Hughes  
 Emmeline.....R. Builette  
 Encore.....MIT Benson  
 Gay Day.....Martin Hansen  
 Gee Gee.....G. G. Plachner  
 Gee Jay.....G. J. McDougal  
 Geneva.....James Baldwin  
 Gracie B.....A. J. Yuhl  
 Gulleima.....Eddie Bjork  
 Hal Lee.....H. E. Seever  
 Harkie.....Don Atkinson  
 Hellabella.....H. C. Huston  
 Hi Ho.....C. E. Holt  
 Jimbo.....H. D. Thompson  
 Jontar.....Perry P. Thompson  
 Ketadi.....M. Richards  
 Klatawa.....C. L. Klieves  
 Lavera.....H. E. Anderson  
 Lilyan M.....Guy V. Williams  
 Lobo.....N. K. Nelson  
 Lollipop.....H. F. Gundlach  
 Loralie.....Elmer Brooks  
 Lovac.....A. O. Nyhus  
 Lucky Star.....Joe Sullivan  
 Lynx.....S. Kahn  
 Mad Cap.....Jim Phillips  
 Maide.....A. L. Shelly  
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 Marguerite.....C. J. Ritchie  
 Marshall II.....H. R. Clifford  
 Mary Lou.....J. W. Walton  
 Merry J.....C. F. Shannon  
 Merry Me II.....C. E. Hayes  
 Mimi.....Hugh N. Mitchell  
 Neptune.....W. A. Nichols  
 Nisimaha.....L. A. Tucker  
 Nomad.....H. R. Burks  
 Orodie.....L. A. Schaufier  
 Patricia.....J. Sellers  
 Patrus II.....Dr. K. Jackson  
 Phlela II.....Wm. A. Silvan  
 Puffin.....I. Munch  
 Pumpkin Seed.....W. L. Larsen  
 Ramona.....H. S. Hammond  
 Ross-T.....H. J. Thomas  
 Royal.....R. V. Wilkins  
 Ruth M.....A. B. Chitty  
 Sandy Joe.....J. Sands  
 Scorpion.....Otto Drager  
 Sea Biscuit.....A. Anderson  
 Sea Fever.....Dr. R. A. Benson  
 Sea Prince.....C. Odenwald  
 Sea Spray.....T. K. Phillips  
 Seal.....A. E. Wallis  
 Sharon Lee.....L. E. Morris  
 Sharon-Marie.....F. Mangan  
 Siesta.....L. A. Bender  
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 Tuna.....L. Smith  
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 Tyng.....T. M. Libby  
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 Vivienne.....Dr. Ray Shutt  
 Whipple.....W. Pease  
 White Rock.....G. Gaumnitz

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Comus II.....John Gordon  
 Cormorant.....Don Carlson  
 Elmarie.....Clark Davis

Fresto.....Dr. L. E. Foster  
 Gannut.....C. Nornean  
 Jahubi.....C. Nelson  
 Kanaka.....R. Finke  
 Katie Thomas.....Bob Hadley  
 Koa.....H. Smalley  
 Lady Eve.....James Munro  
 Loreen.....A. E. Smith  
 Nip.....Jean Hart  
 Pagan.....K. Mathews  
 Sea Chase.....Dr. L. E. Foster  
 Stormy.....H. Hagewood  
 Takuli.....H. W. Kuhlman  
 Tradewind.....J. Sullivan  
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 Widgeon.....J. C. Jobe

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 Lorraine Fecker.....Secretary

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|---------------|------------------------------------|
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| Alibi         | S. E. Raymond                      |
| Allegro       | B. C. Sevensen                     |
| Alotola       | Charles J. Frisbie                 |
| Antares       | Lucile B. Howard                   |
| Arab          | S. E. Adams                        |
| Bama          | Geo. Roberts                       |
| Bellaire      | Ted Cross                          |
| Belle         | E. J. Van Mason                    |
| Blue Blazes   | H. B. Dahl                         |
| Blue Streak   | Edward F. Holland                  |
| Blue Tail Fly | Muriel Thurber                     |
| Blue Water    | Frank Garrig, Jr.                  |
| Bonnie-Jen    | John E. Kelley, III                |
| Bounty        | Bobby Balzhiser                    |
| Butterfly     | Lars Lynnes                        |
| Caprice       | Gayton S. Bailey, M.D.             |
| Catapaw III   | R. W. Griffiths                    |
| Chaperone     | Harold W. Merritt                  |
| Chinook       | Sam S. Pearl                       |
| Cholita       | Dolph Zubick                       |
| Chusan        | Garrett Horder                     |
| Cirrus        | C. F. Bryant Jr.                   |
| Cloud         | Walter R. Cook                     |
| Coho          | Doug Sherwood                      |
| Dades         | Phillip Spaulding                  |
| Dahut         | C. Spencer Clark                   |
| Danny         | Al Jepson                          |
| Dart          | Donald Graham, Jr.                 |
| Deanie        | Mervin Abrams                      |
| Diane         | Sharon Pearson                     |
| Dragon        | E. T. Thomas                       |
| Ecume         | H. Edmund Bailey                   |
| Elohe         | Wm. Bradshaw                       |
| Erant         | Keith Middleton                    |
| Escape        | Frank Jann                         |
| False Alarm   | Jeanne Mattice<br>and John Hillary |

|              |                                   |
|--------------|-----------------------------------|
| First Fling  | Albert Walderon                   |
| Flame        | H. R. Davis                       |
| Flatlie      | Jim Eastman                       |
| Fly Right    | DeForest Perkins                  |
| Flying Fox   | John and Jill Fox                 |
| Foam         | Bruce McCloskey                   |
| Folly        | Strat Biddle, Jr.                 |
| Footloose    | Harold D. Mitchell                |
| Fun          | Robert Hubner                     |
| Furious      | Josef Obzina                      |
| Fury III     | Dave Nurse                        |
| Galatea      | Jack Seymour                      |
| Gam          | Friend Dickinson                  |
| Gee Whiz II  | Eugene R. Jones                   |
| Gement       | John Dore<br>and John Hare Powell |
| Gossip       | R. Philip Smith, M.D.             |
| Gracie S. E. | Edison Kennell, Jr.               |
| Happy Daze   | Frank Faget                       |
| Harpoon      | E. D. Perry                       |
| Heather      | William Buchan                    |

|                 |  |
|-----------------|--|
| Hekate          | Hans Bebie &<br>Charles E. Loughney, Jr. |
| Hells Bells     | Leo Peden                                |
| Holgazan        | John S. Abel                             |
| Honey           | Horace Pearman                           |
| Hussy           | Dr. Robt. N. Rutherford                  |
| Hyak            | Gordon T. Alexander                      |
| Idu             | Bob and Lorraine Walker                  |
| Illusion        | Douglas L. Wilson                        |
| Indian Scout    | Richard Cahan                            |
| Jay Gee II      | Geo. H. Singer, Jr.                      |
| Joy-Too         | Clyde A. Peterson                        |
| Katrina         | Taylor Scott                             |
| Kennett II      | Temple Wright                            |
| Killy Bogus     | Ralph S. Russell                         |
| Koala           | Harry Garrigues                          |
| Kuon            | H. W. Withington                         |
| Lady Alice      | John Soderberg                           |
| Lady Luck I     | Joseph P. Butler                         |
| Lady Van        | Robert Denny Watt                        |
| Lemolo          | Hugh P. Brady                            |
| Light Scout     | Don Amick                                |
| Li'l Luffer     | Norman R. Cole                           |
| Lisa            | Anchor Jensen                            |
| Little Mike     | Lloyd Edward<br>Johnson                  |
| Lively          | Garrett Horder                           |
| Live Lady       | Elliot V. Mock                           |
| Lively Lady     | William H. Frazier                       |
| Lou             | Thomas L. Taylor                         |
| Love Barge      | Anchor H. H. Jensen                      |
| Lulu            | Hugh Watt                                |
| Ma-De           | George C. Martin                         |
| Magingee        | Geo. W. Stoddard                         |
| Manana          | John W. Ellis                            |
| Mandy           | Chas. Thompson                           |
| Marjac II       | Robert L. Perry                          |
| Maaske          | C. L. Burt                               |
| May "D"         | Edward P. Ashe                           |
| Mercury         | Clark L. Stuemppes                       |
| Me Too          | Harry B. Fisher                          |
| Mickey          | Carl L. B. Daniels                       |
| Mike Frigate IV | Paul S. Morris                           |
| Miss Emily      | L. T. Williams                           |
| Mist            | Kenneth A. Metcalf                       |
| Mohee           | James L. Houston                         |
| Myra            | Jack Gahan                               |
| Myth            | David S. Robinson                        |
| Nancy-O         | Dr. Douglas W. Orr                       |
| Neoga II        | A. E. & R. F. Peter                      |
| New Moon        | Larry Dornberg                           |
| Nika            | Frank Rambaldini                         |
| Nimbus          | Irving Anderson                          |
| Nixie           | Marshall Perrow                          |
| Nohea           | Charles E. Christenson                   |
| Olympic         | R. D. Ball, Jr.                          |
| Ono             | Dr. Herbert W. Day                       |
| Opus I          | Samuel L. Lake                           |
| Oregon Star     | John Cram                                |
| Oslo            | Hans-Otto Giese                          |
| Panacea II      | George Reeves                            |
| Pepper          | Van B. Butler                            |
| Pete-Too        | Virginia Platt                           |
| Phynnoderres    | Max Campbell                             |
| Pinafore        | W. K. Holmes                             |
| Polka           | Edward Woodcock                          |
| Prelude         | Paul H. Fordyce                          |
| Raven           | Glen R. Botsford                         |
| Rebel           | Roy E. Anderson                          |
| Reverie         | Dr. Govnor Teats                         |
| Ripple          | Norm Greenbaum                           |
| Rippled         | Gale Griswald                            |
| Riskin          | J. Glen Liston                           |
| Rival           | Ernest A. Banner                         |
| Saga            | Hulbert Murray                           |
| Say When        | Wm. R. Wood                              |
| Sceriet Queen   | Don D. Fairbanks                         |
| Schuss          | John Woodward                            |
| Sea Witch       | W. J. Griggs                             |
| Shady Lady      | Willard Skeel                            |
| Shamrock        | R. T. Lamson                             |
| Short Spice     | James W. Pratt, Jr.                      |
| Shu Shu Gah     | Shella Lyons                             |
| Silverheels     | Lawrence Olney                           |
| Sindbad         | Wm. Presch, Jr.                          |
| Sinn Felu       | Don Fisher                               |
| Skutan          | John Magnuson                            |

|                |                          |
|----------------|--------------------------|
| Skylark        | R. A. Davis              |
| Southern Cross | George Millard           |
| Spanker I      | Katie Knapp              |
| Spirit         | Harold A. Jones          |
| Starbaby       | Chas. Moore              |
| Stardust       | Roy A. Smith             |
| Starlet        | A. W. & John R. Paterson |
| Sula           | Robert Lewis             |
| Sun Dog        | Bernice Howell           |
| Sunny          | Francis A. Le Sourd      |
| Susan          | Philip Spaulding         |
| Svea           | Gosta Eriksen            |
| Symbol         | Ernest C. Divine, Jr.    |
| Taku           | Herb Hanlon              |
| Takulli        | Henry W. Kuhlman         |
| Taruga         | Robert E. Priebe         |
| Tempest        | Jon Bedinger             |
| T-Joy          | Dr. F. B. Joy            |
| Thesis         | Dr. Ed Chambers          |
| Tissain        | Robert L. Sommer         |
| Titanic        | Jeanne Meredith          |
| Tola           | Charles R. Olmstead      |
| Tomcat         | Kit Tucker               |
| Tops           | Robert S. Moore, Jr.     |
| Torrid         | Bill Buchan, Jr.         |
| Tsalo          | Hugh Miracle             |
| Tullebok       | Karl Ivarsson            |
| Tulu           | Richard Palmer           |
| Tyee           | Richard O. Gilbert       |
| Vector         | George Schairer          |
| Vinta          | Conner E. Gray, Jr.      |
| Vulpine        | Russell Baker            |
| Weegee         | E. Howard Gee            |
| Westwind       | George W. Miller         |
| What's That    | Milton A. Flaten         |
| Wiki Wiki      | Robert S. Curry          |
| Wild Flag      | Stephen F. Chadwick, Jr. |
| Williwaw       | Virginia Higman          |
| Wind's Call    | George A. Spaulding      |
| Winsome        | Herb Duxman              |
| Winsome        | Jack Tussler             |
| Wynkin         | Fred Sundt               |
| Zeta           | E. E. (Al) Miller        |

# **DAY ISLAND YACHT CLUB** East Side of Day Island Tacoma, Washington

Horton Wilcox, Commodore  
Robert T. Williams, Secretary  
2211 E. Blvd., Tacoma, Wash.

| Boat        | Owner             |
|-------------|-------------------|
| Billa       | Wm. Sievert       |
| Gray Goose  | Victor Bringham   |
| Ida-Mac     | Horace Mills      |
| Jackpot     | John Hanson       |
| Jolly Roger | Sea Scouts No. 48 |
| Mauder      | O. V. Snyder      |
| Mipat II    | Horton Wilcox     |
| Penny       | L. B. McGaw       |
| Scotti      | Norman Wilson     |
| Viola M     | Robert Bringham   |
| Wee Willie  | Harry Almquist    |
| 30G1821     | Robert Williams   |
| 30D705      | Floyd Willis      |

# **EVERETT YACHT CLUB** Everett, Washington

William T. Griffin, Commodore  
Walter J. Frecht, Secretary  
Box 567  
Everett, Wash.

| Boat      | Owner         |
|-----------|---------------|
| Adeline   | H. J. Kellogg |
| Adelma D  | Roy Davis     |
| Adventure | I. E. Clary   |

|                 |                                     |
|-----------------|-------------------------------------|
| Aggie M         | Noel Caldwell                       |
| Alaska Lady     | A. E. and Glenn G. Healas           |
| Alexis          | A. G. Alexander                     |
| Alia            | C. S. Thomas                        |
| Allegro         | Charles D. Casely                   |
| Allison L       | Herb R. Wilson                      |
| Argosy          | Alf Christensen                     |
| Awpahaw         | Fred C. Shaw                        |
| Babe            | Daly Marc                           |
| Babs            | J. C. Wilson                        |
| Barbara Sue II  | H. L. Keller                        |
| Bark            | Jos. G. Kennedy                     |
| Becky           | John H. Beck                        |
| Bee-Po          | Oliver S. Vognlid                   |
| Beetle          | Don B. Walser                       |
| Beverly Ann     | E. W. Hendrickson                   |
| Billichuck      | Claire R. Dobler                    |
| Billy Jim       | E. Vanderweken                      |
| Billy K         | William H. Kasch                    |
| Bo-Bella        | L. Stubrud and Robert H. Thornberry |
| Bob O Lite      | Robert A. Pringle                   |
| Bon Jour        | Armon F. Frahm                      |
| Bounty          | Wm. F. Knehr                        |
| Brooks          | R. C. Hazeltine and Stan Petersen   |
| Bruce C         | Clifford S. Groves                  |
| Buen Viago      | Arthur A. Burgess                   |
| Care Free       | Arthur G. Hughes                    |
| Carol Jean      | Alexander Gyrog                     |
| Char-Jere       | C. H. Briggs                        |
| Clair-Met       | Dr. C. L. Lauerman                  |
| Clyde           | Harry and Richard Morasth           |
| Coaster         | Kenneth Marvin                      |
| Comet           | Robert D. Wilson                    |
| Coral 5th       | Charles A. Gates                    |
| Corky           | Geo. W. Wardell                     |
| Corajo          | Larry Diffley                       |
| Conji II        | James H. Hambridge                  |
| Corky           | P. W. Lehman                        |
| Cygnat          | L. H. Croxford                      |
| Denny D         | Dale W. Allison                     |
| Dianne          | Henry W. Meyers                     |
| Dippy Duck      | Fred V. Neas                        |
| Docsout         | Dr. E. B. Chase                     |
| Don I           | Don McPhail and Cliff Crusen        |
| Dor Eve         | D. P. Shew                          |
| Dorothy M       | R. J. McBride                       |
| Dougy Anne      | Tom Whyte                           |
| Drake           | Edward L. Slier                     |
| Eastern Star II | Dr. Arnt Petersen                   |
| Egypt           | B. C. Richards                      |
| Eight Ball      | Tom Stiger                          |
| Elaine          | Olaf Bond                           |
| Elsie           | Dr. Alfred Von Stubb                |
| Emma B          | A. E. Bolin                         |
| Erlie           | E. E. Hopper                        |
| Fae-Don         | Don M. Reid                         |
| Feather III     | O. W. Thomle                        |
| Fibber          | Leslie A. Geisel                    |
| Foty Fo II      | A. S. J. Steele                     |
| Four Winds      | Dr. H. B. Walter                    |
| Frog            | Henry M. Brown                      |
| Greata          | Dr. Herbert W. Johnson              |
| Gypsy           | Dr. John G. Cecil                   |
| Haida           | A. B. Moody                         |
| Hamburger Kid   | Ron Johnston                        |
| Hosco           | J. Sievers                          |
| Howdot          | Howard C. Round                     |
| Ingrid J. W.    | and W. W. Juntila                   |
| Irene           | Leslie A. Gritten                   |
| Irene H         | G. A. Hutchings                     |
| Itchy-Scratchy  | Walter S. Dailey                    |
| Jae-Me-J        | Wilbur E. Johnson                   |
| Jennell         | Frank W. Snyder                     |
| Jericho II      | Cecil L. Gault                      |
| Jinx III        | Harry R. Secoy                      |
| Jo Ann          | F. H. Pfligenstofer                 |
| Jo Jo           | Peter H. Helmcke                    |
| Judy G          | W. T. Griffin                       |
| Judy K          | Barton H. and Harold B. Brown       |
| Kajejo          | J. Murphy                           |

|                      |  |
|----------------------|--|
| Katherine D          | S. M. Wood                             |
| Kathy Lou II         | Walter P. Eisner                       |
| Kingfisher           | Ronald L. Broten                       |
| Kla-Ha-Ya            | J. S. Robinson                         |
| Kluane               | Paul A. Watson                         |
| Lady Ann             | Arnold R. Zempel                       |
| Lady Beth            | Harold Land                            |
| Lady Fay             | Chester L. Beard                       |
| Lagoon               | Fred L. Winder                         |
| Lady Leck            | J. A. Leckenby                         |
| Larida               | Fred W. Buhrman                        |
| La Sista             | R. S. Walts                            |
| Laurice              | Warren H. Heinck                       |
| Lela                 | Willis C. Johnston                     |
| Lil Abner            | A. V. Pearson                          |
| Lilly-S              | P. J. Smith                            |
| Linda Lue            | Thos. G. Nesbitt                       |
| Lin Faa              | Donald R. Schmidt                      |
| Little Bill          | William Bartholomew                    |
| Lomita               | Glen W. Hulbert                        |
| Love O' Mike         | G. E. Grossman                         |
| Lucky Strike         | Al E. Anderson                         |
| Luree                | Lester Beaul                           |
| Margaret H           | P. Hanson                              |
| Marie Irene          | George Stern                           |
| Marilyn              | J. A. Spont                            |
| Marlin               | T. A. Jack Sullivan                    |
| Mary-L               | H. L. Lumaden                          |
| Mary Frances         | T. A. Routledge                        |
| Mary Lou             | Emmett Christensen                     |
| Mers                 | M. Schille                             |
| Mildred              | P. J. Downe                            |
| Miny-Mo              | Harry Spence                           |
| Miss Dorothy         | J. L. Quillen                          |
| Miss Stitch          | Dr. A. E. Wahl                         |
| Nancy                | Stanley O. Kanikeberg                  |
| Nancy R              | Andrew H. Richards                     |
| Nelsie               | George J. Schuchart                    |
| Nickyenus            | J. Wayne Graham                        |
| Nixjoy               | N. Reineck                             |
| Olive B              | Clark E. Shults                        |
| O'Nellie             | Arthur L. Case                         |
| Our Toy              | Wm. J. Burns                           |
| Palma                | Royce Smithson                         |
| Pastime II           | Robert E. Nelson                       |
| Patricia V           | John R. Robinson                       |
| Patty Jane           | G. Kinney                              |
| Peewee               | G. M. Lindblad                         |
| Pegasus Mrs. Geo. A. | Bergstrom                              |
| Poom Poom            | A. A. Welga                            |
| Prelude              | Jerry H. Sheller                       |
| Quest IV             | Bert Bedell                            |
| Rae                  | Edwin C. Dams                          |
| Ray-N-Ido            | Loughnan                               |
| Rhea J               | William H. Williams                    |
| Rolly A              | Alfred W. Halvorsen                    |
| Ronda Dee II         | Ralph Hildebrand                       |
| Sampan               | Clifford H. Hansen                     |
| San Juan III         | Hans Anderson                          |
| Sans Wander          | Robert Best                            |
| Sarah Jane           | Dr. J. J. Fritz                        |
| Seabreeze            | H. P. Hale                             |
| Sea Clipper          | V. O. Rider                            |
| Seadad J             | Clarence J. Drullman                   |
| Seagull              | A. E. Boynton                          |
| Sea Gull             | Edwin S. Parker                        |
| Skeeter II           | Oscar P. Nelson                        |
| Skookem              | Elgie Collins                          |
| Slusk                | M. I. Halvorsen                        |
| Smitty               | Ed L. Smith                            |
| Snafu                | John Smevaag                           |
| Snuffy               | Frank Morris                           |
| Speck                | Dale G. Huber, Sr. & Dr. Dale G. Huber |
| Sundown              | Donald K. Gordon                       |
| Sunray Yankee        | Rowan Harmon                           |
| Suzanna              | Ed Larson                              |
| Suzanne              | D. N. Lee                              |
| Tani                 | Parker Williams                        |
| Times-A-Wastin'      | T. R. Robinson                         |
| Topper               | Fred G. Topp                           |
| Uggo                 | C. Christensen                         |
| Ursa Minor           | Chas. A. Selier                        |
| Vagabond             | John J. Meyer                          |
| Van G                | John H. Van Winkle                     |
| Vee Jay              | Jesse R. Coffman                       |
| Wampum               | Ray Treichel                           |



Water Baby.....Robert L. Sullivan  
 Wilderness.....Laurence E. Lean  
 Wild Hare.....W. F. Morrison  
 Wits End.....Edward M. Brayden  
 X-Isle.....G. B. Irvine  
 Yank.....Ray R. Rider

### GRAND COULEE DAM YACHT CLUB

P.O. Box 291  
 Coulee Dam, Wash.

Ray L. Owens.....Commodore  
 H. E. Parmenter.....Secretary

| Boat       | Owner           |
|------------|-----------------|
| Carnation  | B. S. Hanna     |
| Carolyn    | H. A. Mitchell  |
| Cornal     | A. J. Dube      |
| Gypsy      | W. W. Atwater   |
| Julie Ann  | F. A. Banks     |
| Karen Lee  | T. R. Anderson  |
| Marilyn    | C. E. Benjamin  |
| Mary Dawn  | G. H. Eggleston |
| Mudhen     | Wayne Butler    |
| Oahu       | C. E. Sears     |
| Patty      | R. K. Tiffany   |
| Richie     | Paul Lemargie   |
| Whitestone | J. L. Berry     |
| Wilvira    | Wm. R. Hood     |

### INTERNATIONAL POWER BOAT ASSOCIATION

Frank T. Walters.....President

Tacoma Avenue at South First  
 Tacoma, Wash.

George M. Ross.....Secretary

814 American Building  
 Seattle 4, Wash.

#### MEMBER CLUBS

Bellingham Yacht Club,  
 Bellingham, Wash.  
 Bremerton Yacht Club,  
 Bremerton, Wash.  
 Burrard Yacht Club,  
 Vancouver, B.C.  
 Capitol City Yacht Club,  
 Victoria, B.C.  
 Everett Yacht Club,  
 Everett, Wash.  
 Juneau Yacht Club,  
 Juneau, Alaska  
 Nanaimo Yacht Club,  
 Nanaimo, B.C.  
 Olympia Yacht Club,  
 Olympia, Wash.  
 Portland Yacht Club,  
 Portland, Ore.  
 Prince Rupert Rowing and  
 Yachting Club,  
 Prince Rupert, B.C.  
 Queen City Yacht Club,  
 Seattle, Wash.  
 Rainier Yacht Club,  
 Seattle, Wash.  
 Royal Vancouver Yacht Club,  
 Vancouver, B.C.  
 Royal Victoria Yacht Club,  
 Victoria, B.C.  
 Seattle Yacht Club,  
 Seattle, Wash.  
 Tacoma Yacht Club,  
 Tacoma, Wash.  
 Tye Yacht Club, Seattle, Wash.

### LAKE CHELAN YACHT CLUB

Club House Lake Chelan  
 Wenatchee, Washington

Pearne Smith.....Commodore  
 Harvey R. Cooper.....Secretary

P.O. Box 1223

Wenatchee, Washington

| Boat         | Owner                 |
|--------------|-----------------------|
| Aerocraft    | J. Russell Parkhill   |
| Ahoy         | Dr. John E. Gahringer |
| Alaskan      | James R. Lafferty     |
| Aloha        | Glenn Clifford        |
| Anna Maria   | Dr. R. T. Congdon     |
| the 2nd      | Ralph M. Belyea       |
| Bobbie Ann   | R. J. Steler          |
| Carolyn      | H. D. Couch           |
| Cavu         | Pearne Smith          |
| Chipper      | Sid Braker            |
| Clatawa      | R. H. Shannon         |
| Cooper Kid   | Harvey R. Cooper      |
| Daisy Mae    | Edward Wapato         |
| Globe        | Frank J. Shultz       |
| Half Moon    | Newton B. Sloan       |
| Heep Good    | James J. Reed         |
| Hel'ene' 'B' | Le Roy Burton         |
| Holiday      | Dr. R. T. Congdon     |
| Hisco        | Harold Fell           |
| Inthe        | C. E. Warren          |
| Ice Berg     | Floyd E. Berg         |
| Janet        | Ralph E. Thornton     |
| Judy Kay     | W. W. Spiecker        |
| June Bug     | Frank W. Taylor, Jr.  |
| Juniper      | Art Garton            |
| Juniper      | Chuck Franklin        |
| Kae          | E. A. Kuest           |
| Kathleen     | J. K. McArthur        |
| Kauk No. II  | Oliver Holtum         |
| Louleen      | Lyle Mrachek          |
| Louise       | Earl N. Schmitt       |
| Mar-Lew      | Lewis A. Hubbard      |
| Mary Lou     | George F. Miller      |
| Mary Mac     | Geo. S. McLean        |
| Myrju        | George Gaukruger      |
| Nancy        | Ralph M. Belyea       |
| Nuchief      | Lloyd L. Sterling     |
| Queen        | Otto H. Ross          |
| Red With     | Bill Hatcher          |
| Spider-Webb  | Roman D. Webb         |
| Stella Locas | Michael Briggs        |
| The Arrow    | Riley Frazier         |
| The Saint    | John B. Knowles       |
| Theima       | Geo. B. Cooper        |
| Tik-Tok      | E. L. Weimer          |
| Tillicum     | W. D. Plough          |
| Toddler      | M. S. Todd            |
| Vagabond     | G. H. Schubert        |
| 'Wendy'      | E. G. & L. L. Wheeler |
| Whig-Awa     | R. F. Watt            |
| Zanol        | Leonard Zanol         |

### LONGVIEW YACHT CLUB

Longview, Wash.

Cecil Hallin.....Commodore  
 David Hallin.....Secy.-Treas.

| Boat       | Owner             |
|------------|-------------------|
| Barbara IV | C. C. Hallin      |
| Blue Jack  | Ken Shaver        |
| Bobkat III | R. S. Wertheimer  |
| Bonney I   | R. P. Wollenberg  |
| Chifton    | C. Waldo Grenfell |
| Edith      | Bob Campbell      |
| El-Jay     | Dr. C. J. Sells   |
| Gismo      | Frank O. Wolf     |
| Heleen A   | Dr. C. V. Allen   |
| High Seas  | A. C. Watkins     |

|                |                    |
|----------------|--------------------|
| Holiday        | E. W. Wagner       |
| Judy-B-II      | Dr. G. H. Mathis   |
| Julie-Anne     | Ben Lillebo        |
| Kathy          | Hugo Aho           |
| LeRoy          | Roy Dunlap         |
| Little Toot II | Ben Herring        |
| Margaretha     | George Hill        |
| Marguerite     | Chas. Meyer        |
| Marilyn II     | C. A. Axtel        |
| Mary-Ann       | Dr. Wm. A. Johnson |
| Maryjo         | Dick Schneider     |
| Mattie E Lee   | Howard Lee         |
| Nicky-Ann      | Ken Christianson   |
| Pee Wee V      | Bill Burkland      |
| Sally          | Fred Cook          |
| SanBar II      | Dr. John F. Barton |
| SeaAnn         | Mel Rooney         |
| Skippy III     | Chuck Ashton       |
| TheIjon        | J. R. Erickson     |
| Tolly V        | R. M. Tolleson     |

### MEYDENBAUER BAY YACHT CLUB

Route 2

Bellevue, Washington

Burt Marshall.....Commodore  
 Rolf Glerum.....Secretary

| Boat           | Owner               |
|----------------|---------------------|
| Comrade        | Story Birdseye      |
| Dee Dee        | Burt Marshall       |
| El Phileen II  | H. D. Fowler        |
| Folly          | F. M. Treffinger    |
| Happy Chance   | R. H. Evans         |
| Harlee         | Dr. H. F. Corkrey   |
| Illini         | Dr. J. E. Taylor    |
| Lady C         | Starr H. Calvert    |
| Laverock III   | Ed Cunningham       |
| Little Helen C | Wm. Culliton        |
| Lorelei        | Don A. Proudfoot    |
| Panacea II     | Dr. George T. Reeve |
| Paso Tiempo    | Rolf Glerum         |
| Rosie Beth     | Lon Stratford       |
| San Vicente    | George J. Holcomb   |
| Starlight      | Lawrence Calvert    |
| Solano         | D. E. Fowler        |
| Tenderfoot     | R. F. Campbell      |
| Vitesse        | Chester M. Green    |
| Wind Rush      | Wm. E. Lewis        |

### OLYMPIA YACHT CLUB

P. O. Box 765

Olympia, Wash.

Mooring: Southerly tip of  
 Budd Inlet

Frank E. Culp.....Commodore  
 Chester B. Dawson.....Secretary

| Boat        | Owner                |
|-------------|----------------------|
| Alanna      | A. G. Homann         |
| April       | Lynn Ramey           |
| Arabelle    | Leo Arany            |
| Aurella     | Wm. C. Guffey        |
| Beachcrest  | E. O. Sjoboen        |
| Beerboating | Jack Martin          |
| Bobet       | E. D. Brabrook       |
| Carlu       | C. E. Ostrand        |
| Carol II    | H. F. Henth          |
| Cede        | H. N. Anderson       |
| Chandra II  | E. Christopher       |
| Cheryl A    | Charles Ahern        |
| Chieftain   | E. K. Armstrong, Jr. |
| Chipper Boy | Gale Wagner          |
| Chummy      | Ronald Wilder        |
| Commando    | Claude Whitley       |
| Culprit     | Frank Culp           |
| Dal-Bet     | Dale Isom            |
| Dauntless   | H. Wanderlich        |



Dawn..... Charles Harpel  
 Diana Van Dr. F. R. Van Gilder  
 Dottie..... Howard D. Coffman  
 Dreamer..... W. L. Gooding  
 Dunlin..... Raymond R. Meyer  
 Dutch Maid..... Lloyd J. Vosper  
 East Wind..... Kenneth Wagner  
 El Primero..... S. A. Perkins  
 Emmy Lou..... T. Reed Ingham  
 Eryndee..... A. W. Lewis  
 Foursome..... R. Coluccio  
 Franmar..... Col. Frank H. Wright  
 Freddie..... Martin Paulson  
 Galivanter..... Lester P. Benton  
 Gary Barb II..... John G.

Whitmarsh  
 Grayling..... G. F. Richardson  
 Gypsy..... Roy Kimbel  
 Herbie-Dick..... Herbert G. Angle  
 High Seas..... E. I. Marett  
 Hope..... Frank K. Thorp  
 Horizon..... Chester R. Dawson  
 Hyak..... Walter H. Draham  
 Ianthe..... Frank H. Evernden  
 Irene..... A. Scheuweiler  
 Joan..... F. H. Macklin  
 Johana..... W. M. Hamley  
 Jonkin..... A. R. Hartley  
 Joyce II..... Jim Arnold  
 June..... Henry A. Skog  
 Just So..... John H. Hansen  
 Kathleen..... F. Walter Graham  
 Katie Ford..... W. H. Dole  
 Kohala II..... Lyle L. Iversen  
 Lahanna..... Elmer Tillman  
 Libsea..... M. C. Willie  
 Little Skipper..... J. T. Hoffer  
 Loafer..... Fritz Schmidt  
 Lois May..... Dr. A. E. Anderson  
 Marbob..... W. B. McDonald  
 Mardee..... A. J. Bloom  
 Margaret..... J. A. Tannahill, Jr.  
 Margot..... C. Timothy Smith  
 Marianne..... Maurice Milgard  
 Marjorie..... Tom G. Howell  
 Mar-Lin..... Jerry Dimick  
 Mary X..... Dr. I. C. Anderson  
 Midargo..... A. L. Osberg  
 Mione..... A. M. Polson  
 Mona Lee..... Harry N. Boone  
 Myown..... W. W. Metter  
 Nancy..... E. F. Houston  
 Neomar..... Dr. Michael E. Kennedy  
 No Name..... Lois Anderson  
 Nubian..... G. A. Whitehead  
 Nymph..... C. I. Chlman  
 Oh Bud..... Jim E. Arnold  
 Omea..... Dr. H. L. Pettit  
 Ornlada..... Al McCoy  
 Owl..... Geo. Eklund  
 Pamanus..... William Vogel  
 Pamanus II..... Ernest Mallory  
 Patsy-Ann..... Gottfred Peterson  
 Peggy..... R. M. Allen  
 Penguin..... J. E. Jenkins  
 Playback..... Tom Olsen  
 Princess..... W. W. Kemp  
 Punk-In-Seed..... Charles E. Ayer  
 Riptide..... J. L. Anderson  
 Roberta Sue..... Martin Jastad  
 Robert..... Ernest Brabrook  
 Sabini..... R. D. Hofer  
 Saluda..... F. E. Wilder  
 Sandpiper..... L. A. Muesel  
 Sandra II..... Art A. A. Carlson  
 Sandra K..... Earle Kinney  
 Saranar..... Russell O. Stone  
 Sea Ease..... E. L. Ticknor  
 Sea Fun..... Ossie Tranum  
 Sea Hawk..... Marty Jackson  
 Seal..... A. E. Wallis  
 Sea Miss..... Carl J. Arney  
 See-Bee..... M. H. Needham  
 Shargrila..... H. L. Brines  
 Sharon..... K. M. Mandley  
 Shoo Fly II..... W. Herbert Schuh  
 Skookum..... James J. Lohrer

Snoopy II..... F. L. Whitmarsh  
 Sonora..... John Benson  
 Spicoe..... Oscar W. Larsen  
 Spike..... W. M. Spike  
 Spindrift..... Cecil A. Brassfield  
 Spinner..... H. J. Bolster  
 Spray..... Jay Becker  
 Spud..... Wilmet Ramsey  
 Standon..... Fred S. Linn  
 Stella Della..... George J.  
 Larson, Jr.  
 Sue-Gee..... Carl Stover  
 Swan..... A. E. Wallis  
 Sy..... Daniel S. Bigelow  
 Syclar..... T. S. Brundage  
 Terrapin..... George Barren  
 Tuila..... R. E. W. Bombard  
 Vi El..... Jack O'Hannon  
 Wanderlust..... C. L. Carlson  
 Welike..... H. C. Hansen  
 Willie J..... Bill Burch, Jr.  
 Winifred III..... Lee Eyerly  
 Winimar..... S. L. Crawford  
 Winloy..... Lloyd G. Griffin  
 Whirlaway..... Gordon T. Jenkins  
 Woka..... M. T. Russell  
 X..... Charles E. Ayer  
 Yankee Doodle..... Gerry Lemon

## PORT ANGELES YACHT CLUB

### Boat Haven

Port Angeles, Washington

Dr. Melvin Bondelid.....Commodore

Harold Hibbs.....Secretary

| Boat           | Owner               |
|----------------|---------------------|
| Bondy.....     | Dr. Melvin Bondelid |
| Jo-Lee.....    | Palmer Kaas         |
| Marion.....    | William Rose        |
| Mary E.....    | Harold Hibbs        |
| Mora.....      | Ken Erickson        |
| Red Win.....   | Max Strong          |
| Revilla.....   | Rev. R. J. Lieby    |
| Roberta D..... | Cliff Churchill     |
| Scandel.....   | Benj. Phillips      |
| Swan.....      | W. A. Swanson       |
| Vagus.....     | J. A. Montgomery    |

## PORT TOWNSEND YACHT CLUB

Port Townsend, Washington

Hugh Zelts.....Commodore

Harold 'Skip' Lewis.....Secretary

Fred Fields.....Secretary

| Boat            | Owner               |
|-----------------|---------------------|
| Darlens.....    | George Willstoft    |
| Early-Jo.....   | Harry Campbell      |
| Gracey "O"..... | Herbert Bromley     |
| Kume-N-Go.....  | H. Zelts            |
| Pete.....       | Pete Chatos         |
| Pronto.....     | Harold Dollar       |
| Quest.....      | Alvin Carr          |
| Sharie II.....  | Al Ramsdell         |
| Swabby.....     | Lauren Moeley       |
| Takuan.....     | Robert Jones        |
| Thadine.....    | John Shortley       |
| Ve-Jo.....      | C. W. Gupitl        |
| 30K76.....      | Harold 'Skip' Lewis |
| 30K338.....     | James Ginzinski     |
| 30R519.....     | Fred Okert          |

## PUGET SOUND INTERCLUB ASSOCIATION

### Mailing Address:

618 East Milas Ave.  
 Olympia, Washington

Lyle L. Iversen.....President

618 East Milas Ave., Olympia

Richard G. McCann, V.-President

810 Northern Life Tower

Seattle 1

Arthur D. Chitty.....Sec'y-Treas.

11606 87th Ave. S., Seattle 68

### MEMBER CLUBS

Bremerton Yacht Club  
 Everett Yacht Club  
 Olympia Yacht Club  
 Queen City Yacht Club  
 Rainier Yacht Club  
 Seattle Power Squadron  
 Seattle Yacht Club  
 Tacoma Yacht Club  
 Tyee Yacht Club

## QUARTERMASTER YACHT CLUB

Burton Dock

Burton, Wash.

Fairman B. Lee.....Commodore

Ray E. Meyers.....Secretary

### Mailing Address:

P.O. Box 48

Burton, Wash.

| Boat             | Owner              |
|------------------|--------------------|
| Epesar Jr.....   | Ray R. Meyers      |
| Fairlee.....     | Fairman B. Lee     |
| Gladlann.....    | Robert E. Graham   |
| Gremlin.....     | David E. Baldwin   |
| Henrietta.....   | Norman Edson       |
| Imp II.....      | Leo Long           |
| Irene.....       | Dan Paulstik       |
| "J".....         | Mae Young Judson   |
| Lady Jane.....   | Herbert F. Hise    |
| Maggie.....      | Alvin U. Wescoff   |
| Marty Helen..... | N. Earl Davison    |
| My Gal.....      | J. William Eller   |
| Nesika.....      | Francis M. Sherman |
| North Lily.....  | Paul Billingsley   |
| Sea Breeze.....  | Robert R. Renfro   |
| Searose.....     | E. P. Rose and     |
| .....            | James P. Seaborn   |
| Scotty.....      | A. B. McEachern    |
| Teal.....        | George W. Meredith |
| Tojo II.....     | Tom Carstens and   |
| .....            | Joe Long           |
| Tuscarora.....   | J. Knox Woodruff   |

## QUEEN CITY YACHT CLUB

2608 Boyer Ave.

Seattle, Washington

Ray Hacker.....Commodore

Floyd D. Somers.....Secretary

### POWER BOATS

| Boat           | Owner              |
|----------------|--------------------|
| Adventure..... | Wally Miller       |
| Alabama.....   | Earl Tonning       |
| Alerion.....   | Edwin Monk         |
| Alert II.....  | Clarence E. Peis   |
| Alibi.....     | Sewall L. Reynolds |
| Alja.....      | James M. Ballard   |

Ann Saunders.....Lawrence W. Peterson  
Ar-May Col. Ralph Wiltamuth  
Arzie.....Clarence Soule  
Bambi II.....Walt Thayer  
Barbara Ann.....Earl L. Grandy  
Barnacle.....F. B. Mossman  
Bassiot.....Wm. Baskerville  
Bee-Jay.....J. F. Petherick  
Bee-Jay, Dr. J. Howard Snively  
Ben Dora.....Arne Vesojla  
Betty Gee.....Roy D. Nicholson  
Betty W.....Lester W. Green  
Biljim II.....Vernon Brice  
Billybob.....Wm. J. Allen  
Boinder.....Robert W. Zinkie  
Bufflehead.....Herb Carroll  
By-Play.....Richard McCann  
Cameo.....Alma E. Hall  
Cardinal.....Art Atherton  
Cascade.....Donald F. Hiscoc  
Cee-Pee II.....Marshall Minnig  
Chery Lee.....Elmer Bakke  
Chevron.....Elmer S. Foote  
Chilton.....Ersel E. Davis  
Cle Illahee.....Fred Martin  
Close Harmony.....Meigs C. Close  
Como Reto.....Dick Taylor  
Connie M.....G. Herb Johnston  
Contenta.....Lou R. O'Connor  
Cuddy.....Henry Berner  
Dancer.....Jack S. Katz  
Davy-Bill.....F. J. Myers  
Dee Dee.....Burt W. Marshall  
Del-Ray II.....Ray Hacker  
Discovery.....Steve Yates  
Dolly.....Bruce Daly  
Dolphin III.....James McDonald  
Don Dee Lee.....Don S. Swinford  
Donna Fae.....Fred Yates  
Dottie Lou.....M. S. Frampton  
Dutch Maid.....Lloyd Vosper  
Eagle.....W. M. Everitt  
East Wind.....Herbert W. Timm  
Echo.....Samuel C. Ware  
Edburstan.....E. L. Mewhirter  
Edith H.....Clarence W. Sherman  
Eleanor Francis.....E. L. Wolfe  
Elfin.....Leo R. Diers, Jr.  
Eligwen.....Wm. F. Jensen  
Ellixir.....Milton G. Endalov  
Elroy.....John P. Bricker  
Enchantress.....E. A. MacGillivra  
Essayons.....Col. H. J. Wild  
Euphoria.....Dr. John Fountain  
Eveldon.....S. H. Perkins  
Faun.....Herschel Atherton  
Faun.....W. H. Merritt  
Fiesta.....Dr. A. B. Ford  
Florence M.....Verne Kvalshaug  
Florie Ann.....Lloyd Wray  
Gee Gee.....W. H. Burghduff  
Gemar II.....George Doherty  
Georgia.....Spencer Stokes  
Giorgiann.....Thomas L. Compton  
Gold Dust.....K. E. Carlson  
Griff-Ann.....Marshall Hopkins  
Hawkeye.....Dale S. Cogan  
Helen.....T. C. Gunderaen  
Hilma III.....Chet Gibson  
Holiday.....Russell Rathbone  
Irish Lass II.....James A. Taggart  
Jac.....Sam Wilkeson  
Jadon.....Jack Rottier  
Jambelt.....Lawrence Haight  
Jeanne II.....George Moore  
Jeri-Lynn.....Claude C. Calkins  
Jerry Dee.....Schuyler A. Dawson  
Joll.....John E. Rosen  
Jolly Roger Orville R. Cleveland  
Jorgie.....Carl Jorgensen  
Julane.....John W. Breakey  
Juno.....Edward G. Fox  
Kay Don.....V. R. Richardson  
Kels II.....Clarence L. Anderson  
Kim.....H. B. Mortensen  
King Bicardi.....Erling Olsen, Jr.  
Kokanee.....Carl K. Wilson

Lady Anne II.....G. L. McLaren  
Lady Frances.....Dr. W. E. Tupper  
Lady Joyce.....Chas. W. Smith  
Lady Mohr.....F. M. Mohr  
Laheka.....Herb L. Sommerfeldt  
Lawana.....C. E. "Spud" Haasza  
Little Jewel.....James F. McDonald  
Little Witch.....Hans Muller  
Lucky Girl.....Archie Iverson  
Lucky Star.....Eugene H. Brus  
Lurline.....Sherman W. Bushnell  
Marbo.....E. R. Connor  
Mar-Cliff II.....Cliff Cruickshank  
Marian II.....George W. Willey  
Marjane.....Fred E. Weldon  
Marjo.....Joe Baranofski  
Marne.....Preston Smith  
Marvir.....Stuart T. Viggers  
Mary-Dick.....Richard M. Hilton  
Mer-Na.....H. A. Kurtzman  
Mickey Fritz.....Don Tittermore  
Mimi.....Norman Collins  
Miss-B-Havn.....W. R. Davidson  
Miss Stutch.....Dr. Arthur E. Wahl  
Mistress.....Austen D. Hemion  
Misty Waters.....D. E. Hewitt  
Miyot.....Murray Aitken  
My-Haz-El-Lo II.....M. F. Buckman  
Myoi.....O. N. Mayberry  
Nika.....George Ross  
Nina Ray.....Ray Stroble  
No Name.....Jack Miller  
Northwest.....Had Wolfe  
Ol-Doc.....Dr. R. T. Pretlow  
Opal M. Howard.....R. McCulloch  
Orba.....B. T. McMinn  
Pal O' Mine II.....H. L. Kayser  
Pandy.....William W. Fox  
Patheja.....Dr. Otto Strizek  
Patsiea II.....James A. Callender  
Patsiann II.....James G. Frazer  
Peggy Lou.....Louie R. Timmerman  
Peter Pan.....Dr. C. D. Hanbloom  
Peter Pan.....Dale McKean  
Pleasure.....Roy A. Vaughn  
Plooch.....Donald S. Gleason  
Ptarmigan.....John L. Molianen  
Puffin II.....Robert H. Hayes  
Pumiki.....Jack H. Woods  
Pursuit.....John G. Holmstrom  
Quilceda.....Ted Harris  
Racie.....Ray Meyers  
Retriever.....Dr. William Godefroy  
Reveille.....Richard O. Mason  
Roanoke.....Ernest W. Osgood  
Rose Marie.....Archie Johnson  
Roustabout.....Edward T. Rowse  
Ruswin.....Dr. Frank C. Russell  
Salt Shaker.....N. F. Oldenburg  
Sand Man.....John R. Martin  
Sarna.....Jack T. Ranken  
Sarna Lou.....Elwood Stone  
Sea Carol.....Joseph H. Harris  
Sea Dog.....Henry L. Jones  
Sea Dog II.....Dr. H. A. Rodolf  
Sea Idle.....Lester O. Trabert  
Seafarer.....Homer Carroll  
Sea Pal.....Harry L. Clark  
Sea Scamp.....Herb L. Klock  
Sea Shell.....George Wakefield  
Sea Spray II.....Robert W. Littell  
Sea Tang.....Dr. F. H. Pratt  
Seaweer.....Robert E. Landweer  
Sea Wolf.....Seth Green  
Seaworthy.....W. H. Norton  
Selvia.....Rhodes Spencer  
Shal-Juan.....A. E. Ahlberg  
Shamrock.....Wm. A. Bronson  
Shangri-La.....Dr. Ed C. Guyer  
Sharie II.....Milton G. Wilson &  
Shelback.....Dr. Jack Baker  
Shelback.....Floyd D. Somers  
Sheri-B.....Earl D. Brown  
Shirley Marie II.....Russ Fleischer  
Si-Joy.....H. W. Locke  
Sinnemox.....Myer A. Bornstein  
Skimalong.....Wm. E. Boardman  
Solace.....Fred M. Arntson

Spieden.....A. F. Sulak  
Stardust.....John F. Evich  
Storm King.....R. W. Mades  
Sublilaro.....Fred Hasland, Jr.  
Sucia.....Lew Davies  
Susie.....N. J. Blanchard  
Suzann.....L. V. Clough  
Tadpole.....Fred P. Laudan  
Tamenu.....Roland Cornelius  
Tanda.....Edwin W. Oban  
Tang O' Sea.....John E. Baxter  
Tarfu.....Larry Brackett  
Tillicum.....Percy O. Kidder  
Topsy Too.....Frank E. Metz  
Trimmership.....M. G. Shain  
Ursus.....E. B. Bearinger  
Vagabond.....Jack Meyer  
Veronica II.....Maurice J. Kane  
Vljac.....Jack B. Hickman  
Virginia.....Fred Markley  
Wahoma.....Eugene V. Walby  
Water Baby.....Frank Carmichael  
Wee Mook.....Jai Halls  
West Coast.....Alfred Ghezzi, Jr.  
West Way.....Bruce J. Mitchell  
Willsonia.....Rudy Kasper  
Wind Rush.....William E. Lewis  
Yankee.....Philo W. Lund  
Zephyr.....Jim Morrison  
Zetella.....Duncan Jacobson  
Zingara.....T. M. Dennis

## SAIL BOATS

Aquarius.....Lloyd R. Calkins  
Ariki.....Ed Watts  
Audrey.....Percy White  
Carol-Lynn.....Ernest A. Howisey  
Felicity.....Roy E. Hoyt  
Friska.....Norma Bliss  
Galenis.....Victor M. Ganser  
Gleam.....Leonard R. Greenaway  
Hornet.....C. A. Solberg  
Ivana.....C. A. Solberg  
Kiletan.....John W. Richards  
Koru.....Steve E. Johnson  
Little Bit.....L. M. Carter  
Mariner.....Dr. Peter G. Schranz  
Marymont.....J. T. DeFriel, Jr.  
Melada.....Dr. Carl M. Burdick  
Mios-Woendi J. Wendell Trospen  
Nawin.....Karl A. Seastrom  
Neoga II.....A. E. Peier  
Serada.....Dr. C. D. Goodhope  
Simmy.....Henry S. Sanford  
Southern Cross.....George Millard  
Uwhilna.....Albert Lyford  
Wandering Lassie.....L. Burton  
Wee Two.....Lewis E. Bliss  
White Cap.....Dr. David Metheny  
Yellow Cat.....Vesterman E. Stanley

RAINIER YACHT CLUB  
Seattle, Washington

Calvin E. Eddy.....Commodore  
John T. Thomson.....Secretary  
9004 Seward Park Avenue  
Seattle, Washington

Boat.....Owner  
Adelaide.....Wesley H. Wilkes  
Admiral Dewey.....Dewey  
Windmayer  
Beulah M.....Roy A. Palm  
Billy.....Ario R. Cook  
Bloop Bleep.....William R. Thomas  
Carolyn.....Charles Maris  
Connie B.....Everett G. Henry  
Countess.....Harold A. Cade  
Don.....Archie Gustine  
Don Alda.....Clem LaVoy

Don-Marie...Charles H. Dahlgren  
 Duchess...Edmund C. Bold  
 Eight Bells...Joseph H. Little  
 Ellie R...Edwin S. Ramey  
 Foxes...Robert Clark  
 Gladys Vee...Robert C. Brown  
 Gulf Stream...Monte E. Brown  
 Happy Days...F. H. and  
 Holland F. Barrett  
 Ha Ru...E. Harold Wilson  
 Husser...Robert W. Brown  
 Idlin Jett...Lloyd M. Jett  
 Jeanne II...Geo. Moore  
 Jodi...Hayden Williams and  
 John Swanson  
 Just Us...Wm. Harmon  
 Kirby Mac...Dr. Arthur F.  
 Balkema  
 Lady Jean...Alex and  
 John Thomson  
 Lady Luck...Lionel E. Moore  
 Laura...Russel P. Looker  
 Laura Lou...Vesero F. Page  
 Margaret G...Floyd Turnbull  
 Mayde...Glenn Orlob  
 Miss Lakewood Louie Emmanuel  
 Miss Lili...Wm. Mitchell  
 Moonlight Maid...Murray  
 Sutherland  
 Oke Doke...Ted V. Paulson  
 Patsy...Francis Ulrich  
 Peer Gynt...Horace A. Weston  
 Polly Penguin...David B. Stowe  
 RUE...M. D. Hucksins  
 Sandra Dawn...Frank L. Wilson  
 Sharry Lee...Charles J., Jr.  
 and Laurin E. Lamb  
 Silver Wake...Cal Eddy  
 Skipper II...William B. Custer  
 Smoky...Lloyd G. Scott  
 Surplus...Charles L. Stover  
 Swallow...Wm. Poole  
 Swiftsure...Kiert S. Smith  
 Tag-a-long...Aaron L. Lee  
 Tahiti Baby...Harry L. Alcott  
 Taz...E. W. Lyen  
 Three Jays...Hugh G. White  
 Traveler...A. C. Ellington  
 Triki...Grenfall L. Bell  
 Victory...Myer Lurie  
 Wally...Joseph L. Carmin  
 Water Lou...Raymond D. Day  
 Wenmac...James C. McDougall  
 Wendy Jane...Ed Tuttle

### SEATTLE OUTBOARD ASSOCIATION

9009 51st St. Northeast  
 Seattle 55, Washington

Art Shorey...Commodore  
 Eleanor Rankin...Secretary  
 12517 5th N.E.  
 Seattle 5, Wash.

### SEATTLE YACHT CLUB

1907 Hamlin St.  
 Seattle, Washington

Tom D. Tyrer...Commodore  
 John W. Day...Secretary

### POWER BOATS

| Boat      | Owner             |
|-----------|-------------------|
| Accolade  | David M. Williams |
| Adios     | John W. Rumsey    |
| Admiral   | Harold Larson     |
| Adventure | Otis B. Harlan    |

Aggie M...C. Noel Caldwell  
 Aldon...Dr. A. J. Bowles  
 Aldon...Donald L. Rheem  
 Alerion...Edwin Monk  
 Alja...James M. Ballard  
 Anna Lou...Calmar McCune  
 Annadon...Donald C. Taylor  
 Aquilo...Edward D. White  
 Ariene...Stanley E. Youngs  
 Bad Girl...L. M. Norton  
 Barcaro...Ross W. Sutherland  
 Begoda II...D. R. Fisher  
 Ben Dora...Arne Vesaja  
 Benign...Maurice N. Vining  
 Bette R IV...Jay G. McCrary  
 Big Dipper...P. B. Edes  
 Ellgewater II...B. Schoenfeld  
 Billy Boy III...Edgar E. Cushing  
 Black Hawk...L. Everet Landon  
 Blanch B...D. Roy Johnson  
 Blessed Event...Ken H. Enochson  
 Blue Jacket...Miller N. Griffiths  
 Blue Jay...Harry H. Cahill  
 Blue Peter...H. W. McCurdy  
 Blue Waters...Robert Hutton  
 Bonnie...Irving N. Linnell  
 Bonnie Barb II...Bob Clime  
 Bonnie Lassie...E. C. Fiedler  
 By Play...O. W. Sinclair  
 Cabaran...Lynn O. Foster  
 Candy...Buel Hannum  
 Canim...C. E. Houchin  
 Carefree D...H. F. Hopkins  
 Carmelita...Norton Clapp  
 Caroline...G. F. McManama  
 Casco...Dale O. Crawford  
 Charbus II...Ernest J. Ketcham  
 Cheevy...B. C. Beck, Jr.  
 Cherub II...Lincoln Boulton  
 Cita...Charles E. Dunn  
 Claret II...Reuben J. Tarte  
 Close Harmony...Melis C. Close  
 Coho...Wm. McKay Davis  
 Commando...Wm. R. Bryant  
 Continental II...Harold K. Hovland  
 Cookie II...Gilbert L. Duffy  
 Copro II...Fred P. Dobbs  
 Cormorant...J. P. Caldwell  
 Craco...Edmund S. and Truman  
 Cragin  
 Cyrilla...Verner O. Jensen  
 Dabob II...Harry D. Larson  
 Danelle...Dan N. Florito  
 Davey...W. Ward Davison  
 David Jr...Dr. Donald T. Hall  
 Davy F...Kenneth A. Helms  
 Daydream...V. Eyrle Day  
 Debit...Wm. G. McMeekin, Jr.  
 Dee...Hawthorne K. Dent  
 Deerleap...Campbell Church Jr.  
 Dermetics IV...Garland De-  
 Rannels  
 Dindy Ivy...Virginia and Warren  
 Iversen  
 Dirigo...Harry V. Wencer  
 Dolphin Bay...John M. Sorenson  
 Dorene...Orrin R. Fisher  
 Dorothy...Walter T. Coy  
 Dorothy D...J. Charles D'Amico  
 Dorothy Jean II...Albert E. Horn Jr.  
 Duffy...Dr. Eugene L. Kidd  
 Dunlin...Raymond R. Meyer  
 Dus...M. H. Wyman and J. A.  
 Smiley  
 Eastwind III...George V. Eastes  
 Edith R...Kenneth B. Colman  
 Eejay...John H. Simpson  
 Elion III...John Kucher  
 Ellie R...Edwin S. Ramey  
 El Phleem II...Harold D. Fowler  
 El Primero...S. A. Perkins  
 Elsie...Alfred Von Stubbe  
 Esperanza...A. W. Pratt  
 Ethelwyn...Arthur P. Erickson  
 Eugene...Donal F. Heglund

Express...Donald L. Rheem  
 F A D...Frank A. Dupar  
 Fairweather...Webster B.  
 Anderson  
 Fairweather II...K. A. Loveland  
 Finlandia...Sverre O. Jules  
 Fishtales...Donald K. Weaver  
 Five Star...George W. Marshall  
 Freelancer...F. Clyde Dunn  
 Friendship II...Walter M. Lambke  
 Frisky II...Dr. Gordon W.  
 Douglas  
 Gadget...R. C. Anderson  
 Ga-ly-an...John W. Milner  
 Gee Bee III...Chester E. Gunderson  
 Gertrude C...William C. Greer  
 Goblun...Daniel H. Lundin  
 Gretchen...Lysle A. Wood  
 Gulfstream...Monte E. Brown  
 Gwendolan...Frank L. Hawkins  
 Gypsy...Jack Little  
 Halcyon...Verone H. Jakin  
 Hartney A...Hartney A. Oakes  
 Helen II...Stephen Philips  
 Helmar II...Joan T. Lamm  
 Holiday...Gregg C. MacDonald  
 Honey III...Phil Cook  
 Hooshme...Carl Marts  
 Hyades III...R. J. Lamont  
 Ilovene...Leslie C. Potter  
 Ingenting...F. G. Hudson  
 Irene E...Earl Kennell  
 Irish Lassie...Wm. P. Dodge  
 Isle-Air...M. R. Eyer  
 Itchin...R. J. Acheson  
 J. M. C...Tony Jensen  
 Jadon...Jack Rottler  
 Jaanneken...Kenneth B. Rose  
 Joal...Mildred A. Burse  
 JoJo...Howard Irenth  
 Jolly Tar II...E. E. Hemrich  
 Julie Girl III...Jerry Bryant  
 Kaleta...R. H. Byington  
 Kalitan...Donald E. Reza  
 Karen...Dr. Lawrence Mattison  
 Karu...Ted G. Peterson  
 Kathgarr, Jr...Garrett Beckley  
 Kathleen...Henry Judson, Jr.  
 and Sr.  
 Kathy Lynn...Kenneth Ollar  
 Kay Dee II...Quent Williams  
 Keewaydin...Caleb S. Stone, Jr.  
 Kenny Dale...W. Griff Edwards  
 Klatawa...Oliver H. Traay  
 Knute II...C. L. Knudsen  
 Lady C...Lawrence Calvert  
 Lady Grace...Frank C. Houghton  
 Lady Ann...Levi F. Harthorn  
 La Beverie...Harold A. Jones  
 La Sista...R. S. Wais  
 Laverock II...Wm. R. Yeakel  
 Laverock III...Edward Cus-  
 ingham  
 Lazy Legs...A. Talbot  
 Campbell, Jr.  
 Leonore...G. W. Skinner  
 Lillian...J. D. Sparks  
 Lillian D. Foss...C. Arthur Foss  
 Linnea G...G. Robert Geiger  
 Liarevo...H. F. Keeler  
 Lucky Lou...Lysle E. Farnley  
 Maggie...Dr. Percy Guy  
 Mahhln...Dr. G. E. Deer  
 Malibu...Thomas F. Hamilton  
 Margaret J. II...H. D. McDonald  
 Markaret M...Frank J. McHugh  
 Marharver...H. D. King  
 Maria Delores...Clifford Mooers  
 Marilyn...J. C. Bowles  
 Marlen...Leonard Downie  
 Marlin...T. A. (Jack) Sullivan  
 Mary Anne...Samuel I. Ravidge  
 Mary Jane...Capt. Philip Luther  
 Mary Jane II...Joe Mesdag  
 Marylee...Foster M. Pratt  
 Maureen...Dirk Elsinga



Mercury.....Wm. O. McKay  
Miriam.....Reuben C. Carlson  
Miss-B-Hav'n.....Wallace R. Davidson

Miss Blondee.....Winslow Jones  
Miss Fire.....John L. Hamilton, Jr.  
Miss Fleetline.....L. M. Norton  
Miss Kathy.....Charles E. Arnt  
Miss Liberty.....Harry L. Jensen  
Miss Mary.....Dr. John A. Duncan  
Miss Pauline.....Charles H. Horst  
Miss Ski-Quatic.....Robert Schmid  
Miss CB.....Phil Meyer

Moana.....Wm. M. Brennan, Jr.  
Mokulani.....George J. Marlowe  
Mollyo II.....A. G. Ingram  
Mon-Don II.....John Riach  
Monson.....John R. West  
Nan.....A. M. Russell  
Nancy.....Edward C. Burkheimer  
Nancy J II.....Geo. J. Holcomb  
Nancy Pat.....Bayard L. McIntosh  
Nasookin.....Edward B. Skeels  
Nautilus.....Dr. C. J. Powers  
Nelsonia.....Stanley Nelson  
Neomar.....Michael, Karol

and Dr. Michael Kennedy  
Nickenus.....Dr. J. Wayne Graham  
Nika.....George M. Ross  
Nola.....Dr. Dean Parker  
No Name.....James Warrack  
Norida.....Walter F. Loomis  
Northream.....Elmer J. Nordstrom

North West.....Harold J. Wolfe  
No Sail.....W. J. Wilcox  
Nutmeg.....George B. Perry  
Ol Doc.....Dr. R. T. Pretlow  
Olympus.....Charles & Roy Maryatt  
Onawa.....Dr. McCormick Mehan  
Out of Bounds.....Dr. John J. Williams

Partridge.....Harry B. and John A. Fay  
Patty Lou.....James K. Baird  
Peggy.....David W. Harris  
Peggy-O.....J. C. Bird  
Pelagic.....John Graham  
Photoship.....David A. Ballard  
Pintail.....Wm. P. Joslin  
Poison Ivey III.....Linton S. Ivey  
Potay II.....Howard E. Richmond  
Ramjet.....Clinton Eastwood  
Researcher.....Lyle E. Branchflower

Respite.....Gordon D. Marchworth  
Restless.....Dr. Glenn N. Rotton  
Retriever.....William Godefroy  
Riptide.....Thomas Ables  
Riptide.....Russell G. Gibson  
Rita G. II.....Allen P. Green, Jr.  
Robinson Cruise So Loy Robinson  
Rogue.....John W. Harvey  
Romany III.....Stockton Webb  
Rowena.....R. R. Agner

Runaway.....Dr. A. B. DeFreece  
Ruse.....Bruce F. Evans  
Salmon Eggs.....J. Jefferson, Jr.  
Salt Mist.....J. E. Hoffer  
Scudder.....Helen E. Kennell  
Seabreu.....Emil J. Sick  
Seachum.....Dr. George Knowles  
Seafowl II.....S. S. Sayres  
Sea Gal.....Robert G. Engel  
Sea Jay.....C. James England  
Sea Queen.....Malcolm C. Taylor  
Sea Rest.....Robert M. Hardy  
Sea Scamp.....Dr. Carlton J. Powers  
Sea Urchin.....Fred P. Nordby  
Seaweer.....Robert E. Landweer

Serenade II.....W. E. Kershaw  
Sharie II.....Milton G. Wilson  
Shearwater.....Bruce G. Baldus  
and R. C. Kreuger  
Shir-Lyn.....James A. Elder  
Shoreleave.....Stanly W. Donogh

Sidu.....John W. Newbegin  
Silver Spray.....J. Del McCracken  
Skimmer Dr.....Wm. L. Thompson  
Skipjack.....Dr. John Lingenfelter  
Skipper.....Charles G. Schaak  
Skookum.....James B. Warrack  
Skookum.....Gordon C. Clauson  
Skookum.....Ray Shanahan  
Slomoshun III.....S. S. Sayres  
Slomoshun IV.....S. S. Sayres  
Snapper.....Charles Hickling  
Snooks.....Richard F. Hahn  
Snuffy.....Frank Morris  
Sootsux.....Charles L. Smith  
Southern Seas.....Clifford Mooers  
Spindrift.....Marvin S. Allyn  
Spind Queen.....Charles J. Rueden  
Spring Fever.....Richard Moser  
Squatsie IV.....John E. Blume  
Stardust.....Ray Krantz  
Starlight.....Lawrence Calvert & S. H. Calvert

Stitch.....James T. Shanahan  
Stranger II.....F. E. Lewis  
Sublilaro.....Fred K. Haslund, Jr.  
Sumalee.....Alton L. Collins  
Sunny Brook.....Wm. H. Westthal  
Sunshine.....Frank L. Dobbins  
Sunshine.....Kenneth Gordon  
Sunshine.....Hugo W. Osterman  
Sunshine.....Milford F. Vanik  
Susie.....N. J. Blanchard  
Swiftsure.....Kiert S. Smith  
Tabu.....J. C. Boesflug  
Taconite.....W. E. Boeing  
Talluhah.....Dr. George Kennaugh  
Tanager.....Robert F. Close  
Tatty All.....Eric Moe, Jr.  
Taurus.....Dr. A. C. Jordan  
Thalia.....Mary deVries Earthy  
The Duchess.....George Brice  
The Joy.....Dr. Frederick B. Joy  
The O'Fshaw.....Dr. Merrill Shaw  
Thumper.....Richard Connelly  
Thunderbird.....R. Kline Hillman  
Thunderbird.....Wm. M. Ryan  
Tojo.....Thomas Carstens  
Toss-up II.....Wesley Fry  
Trippal.....Paul Cressman  
Trixter.....Clyde F. Holcomb  
Tuna Clipper.....Thomas Autzen  
Turnabout.....W. K. Blithen  
Una.....Charles R. Crouch  
Valkyrie.....Norman E. Berg  
Van V.....Hugh C. Van Valkenburgh

Vee Vee.....Edwards E. Merges  
Victoria.....Geo. Strobbe  
Vivienne.....Dr. Ray Schutt  
Wahineui.....Larry Norton  
Wallybob.....W. L. Owens  
Wanderer.....Thomas F. Glead  
Wanderer II.....Harold G. Stimson  
Vee Mac.....James G. McCurdy  
We-Jac.....A. J. Christensen  
Westward.....Vern A. Cole  
We Three.....Robert C. Baer  
Whimsey.....Edward C. Wells  
Widgeon.....Aubrey A. Naef  
Wilderness.....Laurence E. Lean  
Winifred C.L. James Haberbusch  
Winkin.....John F. Leutinger  
Winmae.....Gilbert A. Paul  
Winnifred II.....Lewis P. Larsen  
Xenomanie.....Mrs. Chas. D. Sully  
Yot.....L. F. Eshon  
Yu-Hoo.....Royal A. Frew  
Yumpin Yiminy.....Conrad Knutson  
Zina.....Robert Wilton  
Zipper.....Frank H. Draper

#### SAIL BOATS

African Star.....Rupert Broom  
Aira.....J. B. Headley  
Alarm.....Ellis Provine and J. Swift Baker

Alcor.....Eustace Vynne, Jr.  
Alert.....Frederic and Margery Graff

Alexandra.....H. H. Dickey & R. L. Clauson  
Alibi.....Samuel E. Raymond  
Aliblu.....Dr. Wm. E. Stetlwagon  
Allegro.....Kinar Osterhaug  
Allegro.....Bernard C. Sevens  
Alotola.....Charles J. Frieble  
Alouette.....Richard H. Boyce  
Amorita.....Dr. Carl D. F. Jensen  
Angelica.....John L. Locke  
Aquila.....Vance F. Bingham  
Argo.....James C. Graham  
Argyle.....Ferrall W. Campbell  
Arlyane.....Arthur Hedderly Smith  
Armida.....H. Arthur Ayers  
Avolante.....A. G. Woodley  
Baloo.....Dr. Tate Mason  
Beazy.....Nicholas Zanides, Jr.  
Bindy.....Leonard Bindon  
Bleep Bloop.....Louis M. Roebke  
Blue Jay.....Robert Gilmore  
Blue Water.....Frank J. Carrig, Jr.  
Blue Water.....Paul Webb  
Bluejacket.....John P. Lidal  
Blythapirt.....Wm. B. Laney II  
Bongigi.....Robert L. Faris  
Bonnie.....Harold T. Klein  
Brazen.....John A. Balliarcon  
Brazen.....Howard Zeck  
Breezy.....Kiefer Fobes  
Butterfly II.....Lars Lynnes  
Caprice.....Dr. Gayton Bailey  
Catspaw III.....Richard W. Griffiths

Cene.....Thomas A. Davies  
Chandra.....John T. Jeffernan  
Chantey.....Robert F. Schoen  
Cheechako.....David B. Law  
Cherelyn.....Evelyn Schmidt  
Cho Cho San.....C. E. McKillop  
Chonita.....Dolph Zubick  
Chusan.....Garrett Horder  
Circe.....Ray Cooke  
Cirrus II.....John O. Warren  
Coho.....C. P. Paschall  
Coho.....A. Doug Sherwood  
Corus.....Samuel K. Ketcham  
Crystal.....Jack A. Bell  
Cub.....Tedrowe Watkins  
Dahut.....C. Spencer Clark  
Daigulri.....Ross F. Wood  
Dart.....Donald Graham, Jr.  
Derevo.....H. Handley Cloutier  
Dolphin.....Harry B. Jones, Jr.  
Dorade.....J. Franklin Eddy  
Dulcibella.....Verne F. Ray  
Fdelweis.....Walter Power, Jr.  
El Lobo.....Edwin T. Naden, Jr.  
Elohe.....W. E. Bradshaw  
Endeavor II.....Sandy Pratt  
Entre Nous.....Walter H. Johnson Jr.

Fair Wind.....H. S. Emanuels  
Falcon.....James R. Stirratt III  
Feather.....Jon G. Rose  
Flame.....Hal R. Davis  
Flit.....Margaret and Marilyn Hovland  
Flyaway.....John W. Newbegin  
Friendship.....Dr. A. G. Friend  
Frolic.....Diana S. Thorp  
Frolic.....Mrs. Clarence W. Nelson  
Fun.....Robert W. Hubner  
Fury II.....Peggy and Nancy Lawton

Fury III.....Dave L. Nurse  
Galatea.....John C. Hughes  
Gam.....Franklin P. Robinson, Jr.  
Gold Star.....W. E. McElfratrick  
Gossip.....Dr. R. Philip Smith  
Gracie S. E. Edison Kennell, Jr.  
Gremlin.....Robert Day  
Grey Gull.....H. D. Springer  
Gwendolyn II.....P. C. Hellenthal



Gypsy Heart August Buschmann  
H. H. Heien Dwight Hill, Jr.  
Happy Daze Frank A. Faget  
Harpoon E. D. Perry  
Heather Tom Farrell  
Helene V. R. Scheumann  
Hobo Wm. W. Watkins  
Hornblower Russell Phinney Jr.  
Hornet Harold B. Murray  
Hussy Dr. R. N. Rutherford  
Illusion Douglas L. Wilson  
Indian Scout Richard H. Cahan  
Intrepid Dr. David W. Dale  
Ja Mal Pat Lowman  
Jan Nils Rosenberg  
Jandy David A. Norton  
Jandy Gordon Prentice, Jr.  
Jay Gee H. George H. Singer, Jr.  
Jim-Jam Frank E. James, Jr.  
Jinker Robert Sebastian  
Kanaka Harris A. Johnson  
Karen Karl A. Hostetter  
Kelpie Ceibert W. Baillargeon Jr.  
Khorasan Frank D. James Jr.  
Kibitzer Wm. Y. Baker  
Klahowya A. W. Van Kirk, Jr.  
Koala Dr. H. B. Garrigues  
Krishna Michael Weaver, Jr.  
Kuon Holden Withington  
La Gaviota C. Frederick Harley  
La Push Ronald Stovner  
Lady Alice John Soderberg  
Lady Jane Bert and Lang Hyde  
Lady Van Robert Denny Watt  
Laura Jean Kenneth Anderson  
Leilani Harold E. Gray  
Lemolo Hugh P. Brady  
Light Scout Donald H. Amick  
Lightning Charles W. Buehler  
Lightning James W. Haviland  
Lightning Bird Margaretta Hillman  
L'il Luffer Norman R. Cole  
Lisa Anchor Jensen  
Little Dipper Doug Fryer  
Little Mo Wm. and A. E. Crayne  
Lively Garrett Horder  
Long Story II George E. Horton  
Lorelei Don C. Proudfoot  
Love Barge Anchor Jensen  
Luff John M. Peterson  
Lulu Hugh Watt  
Ma Dee George C. Martin  
Manana Wilbur L. Brown  
Manana John W. Ellis  
Mandra Hollis Farwell  
Marda Daniel B. Trefethen, Jr.  
Margaret D. Andrew Wright  
Marian II John D. Rogers  
Maribou Don C. Whitworth  
Mariner Rear Admiral C. W. Eshom  
Marjac II Robert L. Perry  
Marjean II Geo. W. Farnsworth  
Marmetta Edmund Hayes  
Maruffa John Graham Jr.  
Mercury Clark L. Stumpges  
Mercury Daniel B. Trefethen, Jr.  
Merry Mac John W. McDonald  
Me vita Winthrop F. Case  
Mickey Carl B. Daniels  
Mike Frigate IV Paul S. Morris  
Millimar Ted A. Bender  
Minion Richard Sykes  
Miss Mischief Becker R. Wilson  
Mist K. A. Metcalf  
Mistress W. J. Wilcox  
Mohes James L. Houston  
Mon Reve Sidney Gerber  
Moon Glo Richard B. Hagen  
Mrs. Pettibone J. H. Moffett, Jr.  
Murrelet W. J. Curry, Jr.  
My Sin Robert C. Munger  
Naiad A. S. Kerry

Nancy Ann John Boren  
and J. J. Harris  
Nautilus Richard L. Miller  
Nautilus Robert MacRae  
Nautilus III T. Harbine Monroe  
Navigo Virginia Vining  
Navita C. Le Egtvedt  
Nawitka Edward C. Graff  
Neoga Allen B. Engle  
Night Witch George M. Pensie  
Nika Frank A. Rambaldini  
Nimble Allen B. Dorsey  
Nimbus Dr. Irving Anderson &  
Frank Calvert  
Nixie Marshall Perrow  
Nonama Ralph Wolbert  
Nootka Keith Flaken  
North Wind W. M. Crawford  
Oceanid Maurice Rattray, Jr.  
Odyssey Henry T. Meador  
Ono Herb W. Day  
Opus I Samuel L. Lake  
Opus I A. C. Riabell  
Oregon Star John Cram  
Otabette M. W. Brower  
Pam Peter C. Best  
Pampero Henry A. Eilers  
Paper Doll James H. Henkel  
Passat Tom Wells  
Pequod Alexander A. Bill, Jr.  
Pete Too Virginia P. Platt  
Phynnoderes Max S. Campbell  
Pinky Prim James W. McKee  
Pocomoto Dr. W. H. Stetwagen  
Pody Wayne R. Anderson  
Pole Star Mrs. James E. Hunter  
Prelude Richard M. Phillips  
Python Robert G. Bowden  
Razzle Dazzle R. J. Smith and  
Delancey Lewis  
Red Jacket Geo. H. Parsons  
Ripple Gordon &  
Malcolm Villenik  
Risken J. Glen Liston  
Rival Ernest A. Banner  
Rory Douglas J. Stimson  
Rowan Ray Schutt, Jr.  
Rowdy Elizabeth &  
R. A. Osborne  
Rublayat Russell H. Huff  
Saber Garrett G. Sweeney  
Saga Wayne Murray, Jr.  
Salem Witch II Cranston  
Paschall  
Salty Kenneth F. Norden  
Sandy Stanley A. Brand  
Sanja George E. Riley  
Sanja II Dale Dow  
Scarab Ralf E. Decker  
Scarlet Queen Donald D. Fairbanks  
Schuss John B. Woodward  
Sea Goon Harold Muzatko  
Sea Witch Jack Warburton  
Sharon L. Miles McCoy  
Short Splice James W. Pratt, Jr.  
Sindbad Paul C. Harper  
Sinn Gordon Cash  
Sirocco Tom W. Wheeler, Jr.  
Sir Tom Wheaton D. Blanchard  
Skip Caspar Clarke  
Skylark John A. Burnett  
Spanky Edward G. Morgan, Jr.  
Spartan A. C. Wright  
Spirit H. A. Jones  
Spunky Too Walter H. Brown  
Star M. C. Hickey  
Starbaby Charles Moore III  
Starbright Richard T. Davidson  
Stirling C. A. Newell  
Steady Carl Lovstad  
Stormy Weather Harold  
Heliessen  
Subdeb Peter McTavish  
Suds R. J. Smith and  
Delancey B. Lewis, Jr.  
Sunda Wm. H. Griffiths

Susan Garland Connor  
Suva Dietrich Schmitt  
Swift R. S. Moore  
Swift-Schuur Richard Schuur  
Tahuna II G. S. Marlatt  
Taku Herbert H. Hanlon  
Taruga Robert E. Priests  
Teal James C. Blets  
Tenderfoot R. F. Campbell  
Thesis E. F. S. Chambers  
Tide Donald Adams  
Tipay Petty Ryan and Sherron  
Van Antwerp  
Tola Charles Olmstead  
Tops Robert S. Moore, Jr.  
Toujour Girl Albert Patnik  
True Luff Bjarne Jensen  
Twenty Four Wm. R. Nightingale  
Twilight Raymond H. Barnes  
Twinkle Ben C. Seaborn  
Valkyrie Robert W. Condon  
Valkyrie Mason Emmons  
Varuna Bruce Morgan  
Veede Andrew and David V. Harris  
Vega Thos. E. Hamilton  
Venture Gardner Gamwell  
Vixen Victor Bank  
Wahoo Wm. E. Boeing, Jr.  
Wanderlust Dick Morgan  
Watauga John T. Jacobson  
Westward Ho John B. Heisel  
Whani Whani C. Frederick Harley  
What's That! Milton A. Flaten  
Whichever Tedrow Watkins  
White Cloud II R. R. Pratsch  
White Cloud Howard Carroll, Jr.  
Whitcap A. James Cook  
Who Me A. Dallas Hagan  
Wild Flag Stephen Chadwick, Jr.  
Wild Goose Don L. Cooney  
Windawep L. E. Geary  
Winsome Edward F. Pearson  
Wisp Franklin K. Fox  
Wood Pussie A. Limus Pearson  
Winkle Harold T. Klein  
X Arthur Grant Butt  
Y Knot Denny Thorlakson  
Zingara Richard E. Odell

# SHOREWOOD YACHT CLUB

Mercer Island  
Seattle, Wash.

K. J. Martin Commodore  
Strat Biddle Secretary  
Boat Owner  
Bon-Jea Wesley Fry  
Folly Strat Biddle  
Jadene J. R. Potter  
Jay-Gee George Singer, Jr.  
Karen David W. Whitlow  
Lil Darlin' W. B. LeValley  
Lucky Lou Lyle Parmly  
Ontime E. J. Martin  
Penaljo James Swanson  
Peril Harley Nygren  
Phyllis II Edwin Harrison  
Pinky Prim J. W. McKee  
Tampico Robert H. Bendig  
Winkin Fred Sundt

# SPOKANE SAILING CLUB

W. 309 Second  
Spokane, Wash.

Warden Hanel Commodore  
John Kendall Secretary  
Box 2138  
Spokane, Washington

| Boat        | Owner                |
|-------------|----------------------|
| Cape Cod    | Dr. R. N. Hamblen    |
| Flatlie     | Len Burge            |
| Isabella    | Don Blume            |
| Inertia III | Frank Weaver         |
| Jo Jo K     | John Kendall         |
| Lex In Se   | Jack Dibblee         |
| Marjon      | Harold Moss          |
| Mistral     | Dr. C. A. Veasy, Jr. |
| Night Wind  | Joe Andrews          |
| Penguin     | J. F. Amsberry       |
| Rascal      | Warden Hanel         |
| Snafu       | Harold Thompson      |
| Snipe       | Howard Damon         |
| Snipe       | Marion Hay           |
| Snipe       | Robt. Johnson        |
| "Threesome" | Boardman Nolan       |
| Windy Lou   | O. C. Calkins        |

### SWINOMISH YACHT CLUB LaConner, Wash.

|                   |              |
|-------------------|--------------|
| G. E. "Al" Knapp  | Commodore    |
| Frank Sanford     | Secy.-Treas. |
| Mt. Vernon, Wash. |              |

| Boat         | Owner                |
|--------------|----------------------|
| Bronze God   | Robert Dursch        |
| Charlotte    | D. J. Lawson         |
| Dartaway     | John W. Cook         |
| Dawn         | G. E. Knapp          |
| Di'sa        | Forest Prater        |
| Flying Cloud | George McMillan      |
| Hattie D     | Claud Davis          |
| Jasper       | Claud Sanford        |
| Jastel       | John C. Cox          |
| Jeanne       | Cmd. Henry G. Cooper |
| King Thor    | Martin Olson         |
| Lady Leck    | Jim Leckenby         |
| Marilyn      | Frank Sanford        |
| Respite      | F. Rasmussen         |
| Rita Anne    | E. Mercereau         |
| Sea Queen    | Don & Bob Maloy      |
| West Shore   | J. Herb Gardner      |

### TACOMA YACHT CLUB Point Defiance Park Tacoma, Wash.

|                   |           |
|-------------------|-----------|
| William A. Kunigk | Commodore |
| Otto L. Johnson   | Secretary |

#### POWER BOATS

| Boat          | Owner               |
|---------------|---------------------|
| Aeolus        | Dr. A. L. Schultz   |
| Albil         | Doug Coates         |
| Alida         | Willard Andre       |
| Allright      | Frederick B. Wright |
| Altamaha      | Chas. F. Hufford    |
| Amberjack     | C. G. Gilliard      |
| Anna-Lora     | L. G. Allotta       |
| Anna-V        | Olaf Ericson        |
| Aqua Tahquitz | Caryle F. Muehler   |
| Aquilon       | Stanley V. Dunning  |
| At Fase       | Robt. S. McLean     |
| Atica II      | Charles W. Hoffman  |
| Banshee       | Ray R. Kelly        |
| Beachcrest    | B. T. Sjoboen       |
| Bea Mac       | E. R. Sizer         |
| Bella         | W. H. Lindberg      |
| Bemargin      | Charles Wolf        |
| Ben Bay       | Peter F. Bennisson  |
| Betty B.      | Bert Bradley        |
| Bidarka       | Gerahom C. Rowland  |
| Billie Boy    | J. A. McDougall     |
| Bonnie B.     | Rufus Parker        |
| Bonny Belle   | Carter Lee          |
| Bounty        | Geo. Thompson       |
| Bregita       | Dr. J. W. Gouley    |

|                |   |
|----------------|---|
| C. B. D.       | Wm. La Vasser                             |
| Can Do         | Art Rowe                                  |
| Cascadian      | Russell W. Ross                           |
| Cecelia        | J. C. Bekemans                            |
| Cinnebar II    | N. L. Rose                                |
| Clara-Jean II  | Mitchell Skansie                          |
| Clara V        | C. A. Kintz                               |
| Colleen        | L. G. Peck                                |
| Coralie        | Ted Hill                                  |
| Corky Too      | A. C. Barnett III                         |
| Crest          | Haldor Dahl                               |
| Cristy Jane    | Frederick C. Wolf                         |
| Cromwell       | C. E. Powell                              |
| Daphne         | Chas. Reberger                            |
| Dawn           | Anton Johnson                             |
| Dixie III      | Frank I. Liles                            |
| Diorah         | Harold C. Gates                           |
| Do-Mar         | Herman E. Tenzler                         |
| Don-Lois       | John Lester                               |
| Dorette        | Mrs. Harvey Kellogg                       |
| Doris II       | John Rule                                 |
| Dorothy-Jeanne | E. L. Cleveland                           |
| Dorothy III    | M. W. Pitts                               |
| Dot            | Tom Malra                                 |
| Driftwood      | L. T. Barker                              |
| Duchess II     | Dr. Ross D. Wright                        |
| Dyk-N-Vye      | Frank Willard                             |
| El Primero     | S. A. Perkins                             |
| El Tejano      | F. D. Dean                                |
| Elsa           | Anton Petrich                             |
| Escape         | Henry Wagner                              |
| Euforia        | Treacy Duerfeldt                          |
| Fairliner      | Allen and John Petrich                    |
| Fiesta         | O. H. Brasier                             |
| Flicka         | Anton Ohlson                              |
| Fraa           | Frank Heffernan                           |
| Fred Mar Clay  | Clayton I. Thomas                         |
| Free Lance     | William L. Worden                         |
| Gadget         | Robert C. Bourdon                         |
| Gallant Lady   | M. C. Riggs                               |
| Gedoca         | Harold T. Sorensen                        |
| Geo. III       | Geo. W. Raudenbush                        |
| Gilp           | C. F. T. Rowe                             |
| Ginni Belle    | George Baydo, Jr.                         |
| Glennora       | W. H. Van Horn                            |
| Glory-Be       | Charles Love                              |
| Green-Wing     | Lloyd Eberhardt                           |
| Greenwing      | Lloyd J. Eberhardt                        |
| Happy Hours    | Ray Howe                                  |
| Heather Bell   | A. D. Williams                            |
| Helcliff       | Clifford Otto                             |
| Helene         | Donald E. Davies                          |
| Hi-O-Hi        | Walter J. Ryan                            |
| Holiday        | Wm. Mojean                                |
| Holmacrel      | Chas. and Earl Cooper                     |
| Honey-Belle I  | James Repp                                |
| Hornet         | E. D. Rich                                |
| Howdy II       | H. W. Trefry                              |
| Hull's Hull IV | Warren Y. Hull                            |
| Hunky Dory     | Norman Runions                            |
| Huntred        | Ed S. Wright                              |
| Ida-Mac        | Horace Mills                              |
| Illahee        | Dr. E. D. Mosier                          |
| Imp II         | Leo Long                                  |
| Irma Belle     | Arthur W. Hinz                            |
| Islander       | John J. Carbone                           |
| Jackpot        | Dr. John Hanson                           |
| Jarbo III      | A. S. Hageness                            |
| Jet            | Ted B. Palmer                             |
| Jo Ann         | Fred Treichel                             |
| Joanette       | Roy Pietenburg                            |
| Julie Girl II  | Harold Phillips                           |
| Kalook         | Paul Billings                             |
| Kamlaikin      | Warren Rathbun                            |
| Kathleen       | David F. Pennington                       |
| Keewaydin      | Elbert and Frank Baker and George Russell |
| Kid Boots      | John Horjes                               |
| Killiwake      | Gotfred O. Stovner                        |
| Kingfisher     | Dr. W. W. Mattson                         |
| Klahowya       | E. H. Webb                                |
| Kodiac Bear    | Paul Riggs                                |
| Lady Lynn      | Al Hale, Jr.                              |
| Laurena B      | James Enoch                               |
| Leeway         | Monta Boston                              |
| Leeway         | Robt. E. Lee                              |
| Lellani        | B. D. Elliott                             |

|               |                                 |
|---------------|---------------------------------|
| Leisure       | H. W. Williams                  |
| Lilmar        | George W. Ross                  |
| Linnea G      | Gus Geizer                      |
| Little Toot   | E. A. Riebe                     |
| Lori          | Carl C. Overhuls                |
| Lower Light   | R. Robt. Crawford               |
| Luanne        | Jules Nysen                     |
| Lundee        | A. E. Lundgren                  |
| Mabel B.      | A. R. Bunge                     |
| Madge Ellen   | Edmond Zukowski                 |
| Majo III      | Mrs. R. Glenn Sherman           |
| Majorette     | John C. McEachron               |
| Maretta       | Otto Janacek                    |
| Marco         | William J. Skansie              |
| Mari-Mar      | Norman Garlick                  |
| Marjoh        | Evald Anderson                  |
| Marpet II     | Peter Formuzis                  |
| Martha        | W. H. Allard                    |
| Martina       | J. D. Shotwell                  |
| Mary Ann      | George Trey                     |
| Mary Lee II   | Fred Meyer                      |
| Maudos II     | O. V. Snyder                    |
| Minx          | J. G. Dawson                    |
| Miriam        | Reuben C. Carleson              |
| Miss Cathleen | W. R. Emery                     |
| Mittie        | F. D. Metzger                   |
| Modesto II    | Ted Worthington                 |
| Mola          | Wm. L. Healy                    |
| Muir Maid     | Jack Ritts                      |
| Nawita        | E. C. and H. John Halverson     |
| Neocla        | Glen T. Brown                   |
| Newshawk      | G. W. Foss                      |
| Nirvana       | Audley M. Fraser                |
| Noco          | Willard P. Palin                |
| No-Go         | Dr. Charles Larson              |
| Orion         | James Rollag                    |
| Owana         | R. B. Shaddock                  |
| Page's Polly  | Robert Springer                 |
| Palette       | Vernon Tuttle                   |
| Pam II        | Jerome L. Weinstein             |
| Patrus        | George Giffin                   |
| Paulajohn     | H. F. Stapleton                 |
| Pearl Ann     | Howard G. Post                  |
| Peggy Jean    | Arney R. Colby & Dr. C. Trimble |
| Peggy Too     | J. Allen Clark                  |
| Penny         | Fred D. Bolen                   |
| Petanna       | Harold F. Peterson              |
| Picaron       | A. M. Grilley                   |
| Puget II      | Sidney Conquest                 |
| Ray-Vera      | Raymond Scott                   |
| Research      | Wm. Parker                      |
| Richlu        | Bernus W. Recob                 |
| Riptide       | Ernie Ohlson                    |
| Robbie        | Dr. J. R. Campbell              |
| Roberta Ann   | Clifford C. Clark               |
| Roberta-Gene  | Robert Wolff                    |
| Robin Wood    | A. W. Pitts                     |
| Rodger J      | Harold H. Billie                |
| Rodgermill    | Clifford Paulson                |
| Romance       | Bert Sundgren                   |
| Ruby J.       | Walter Witte                    |
| Sally J II    | Victor B. Johnson               |
| Santa Rosa    | Otto Drahold                    |
| Sea-Breeze    | Russ Michael                    |
| Sea-Cap       | Forrest Lyons                   |
| Seacsta       | Otto L. Johnson                 |
| Sea Fox       | Col. Howell A. Nash             |
| Sea Miss      | Albert Sandberg                 |
| Sea Mist      | Frank E. Fuller                 |
| Sea Rose      | Eugene Rose                     |
| Sea Zephyr    | J. J. Huntington                |
| Shady Lady    | John L. Plowden                 |
| Shamrock      | Lloyd Waterhouse                |
| Shirley Jo    | Raymond Wall                    |
| Show Girl     | Frank T. Walters                |
| Shutter Bug   | Kenneth Ollar                   |
| Silver Spray  | Jack Shipley                    |
| Skippy        | Earl K. Barker                  |
| Skitter       | Bartlett Rummel                 |
| Slo Pok II    | Ralph K. Still                  |
| Spray II      | Fred Ludwig                     |
| Stealaway     | B. F. Smith                     |
| Sultans       | Harold Thompson                 |
| Sulu          | Dr. Ellwood Davidson            |
| Susan-Lynn    | A. E. Malacky                   |

|                   |                    |
|-------------------|--------------------|
| Tabolah           | J. T. Bennett      |
| Terron            | Buford L. Payson   |
| Thea Foss         | Henry Foss         |
| The Bobbin        | Judd Day           |
| Thelma K. Stanley | N. Kolitzoff       |
| Theo Lo           | Theo Zimmerman     |
| Thora Gay         | Dr. Roy F. Henry   |
| Tinker            | James W. Loveland  |
| Tloga             | Roy Virgil         |
| Tom-Kat           | E. D. Thompson     |
| Trade Wind        | C. R. Mojean       |
| Traveler          | John Fletcher      |
| Trim Too          | Stanley Steel      |
| Triton            | G. W. Wright       |
| Troistig          | John H. Anderson   |
| Tyee              | James DePolo       |
| Valaron           | Norman D. Kear     |
| Venice            | Roscoe B. Shiley   |
| Venture           | Ervin Z. Fredricks |
| Villa Lou         | A. M. Dabroe       |
| Wee Chinook       | Dr. C. E. Stafford |
| White Cap         | R. G. Hawkins      |
| White Spray       | W. W. Gaudreau     |
| Willmar           | H. O. Ekre         |
| Will-O            | Will H. Oliver     |
| Willopeg          | W. H. Ostruske     |
| Yankee            | William A. Kunigk  |

#### SAIL BOATS

|           |                                       |
|-----------|---------------------------------------|
| Adelphi   | C. N. Udall                           |
| Alert     | C. D. Ozen                            |
| Alouette  | Mrs. W. D. Christie<br>and J. Arnston |
| Anada     | E. R. Johnson                         |
| Aurora    | Al Faithfull                          |
| Caper     | Dick Christensen                      |
| Clinnebar | Ben Barry                             |
| Coquette  | Dick Williams                         |
| Dairabar  | Dr. Wm. Taylor                        |
| Dena      | B. De Mars                            |
| Donna II  | L. Wasserman                          |
| Emquad    | Ken Hore                              |
| Eric      | Don Christensen                       |
| Foam      | S. B. Larsen                          |
| Gusty     | Wm. Nichols                           |
| Hanukal   | John Potter                           |
| Hobo      | M. Powell                             |
| Inthe     | Paul Plotts                           |
| Iida      | Neal Nelson                           |
| Jaunty    | N. Christensen                        |

|                 |                         |
|-----------------|-------------------------|
| Jo              | Wm. Nelson              |
| Lady Luck       | Neil McConaghy          |
| Loki            | Fred Haley              |
| Loriel          | Jack Evans              |
| Marjune         | Martin Stockwell        |
| Marnie          | Wm. Dobbysa             |
| Nautilly        | Dudley Bothel           |
| Nautilus III    | Harbine Monroe          |
| Netha           | Curtiss Hill            |
| N'Heaven Too    | Bob Anderson            |
| Nixie           | Marshall Perrow         |
| Penguin         | H. C. Perkins           |
| Popeye          | F. F. and R. P. Hammond |
| Reverie         | Dr. Gov. Teats          |
| Ripples         | Wm. Christensen         |
| Roddy Tot       | Edwin E. Bare, Jr.      |
| Saturna         | Dr. J. O. Taylor        |
| Scarlet Clipper | Kirk Hull               |
| Scheherazade    | Tom Falk                |
| Swiftsure       | A. Gratzner             |
| Symra           | Wm. Larson              |
| Talofa          | J. G. Robinson          |
| Thorobred       | M. G. Cookingham        |
| Tlu             | Frank Boskovich         |
| Totem           | Jack McPherson          |
| Weelammer       | R. McMahon              |
| Wendy I         | H. Hutchinson           |
| We Three        | L. M. Rosenblatt        |
| White Cloud II  | Rad Pratech             |

#### TYEE YACHT CLUB

The Marina Mart

1500 Westlake N.  
Seattle, Washington

|               |           |
|---------------|-----------|
| Russ Thompson | Commodore |
| William Rols  | Secretary |

4656 41st N.E.  
Seattle, Wash.

| Boat       | Owner            |
|------------|------------------|
| Birdie     | Dee Dorsten      |
| Blue Skies | Frank Stevens    |
| Bonita     | Harold P. Hall   |
| Cerose     | Cecil Pullen     |
| Debit      | William McMeekin |

|             |                      |
|-------------|----------------------|
| Deliver B.  | Elwin O. Phelps      |
| Eudora      | Edward Hiney         |
| Gayle       | Paul E. Williams     |
| Hilma III   | Chet Gibson          |
| Katrinka    | Lloyd Nachtway       |
| Moon Mist   | Walter M. Hupp       |
| Photo Queen | J. D. Williamson     |
| Sea Tramp   | Harold Salveson      |
| Tassie      | Oscar E. Weiden, Jr. |
| Teco        | J. Russell Thompson  |
| Vagabond    | Jack Meyers          |
| Venida O    | Edwin J. Osols       |
| Veterinario | Dr. T. W. Penfold    |
| Vicul       | Culton Greene        |

#### 20-KNOTTERS

c/o Aero Marine Club  
Sorrento Hotel  
1001 Terry Ave.  
Seattle 4, Wash.

|                   |                |
|-------------------|----------------|
| Jack Henderson    | Commodore      |
| Jerry Bryant      | Vice-Commodore |
| 1117 E. Northlake |                |
| Seattle 5, Wash.  |                |

#### UNIVERSITY OF WASHINGTON YACHT CLUB

307 Hub

University of Washington  
Seattle 5, Washington

|                   |           |
|-------------------|-----------|
| William R. Larson | Commodore |
| Miss Thea Gevera  | Secretary |

#### YAKIMA BOAT CLUB

Rimrock Lake, Washington  
Joseph Faucher.....President  
A. M. Willoughby.....Sec'y-Treas.  
1003 N. 10th Ave.  
Yakima, Washington

## Oregon Yacht Clubs

#### ASTORIA YACHT CLUB

Route 3, Box 7  
Astoria, Oregon

|                  |           |
|------------------|-----------|
| Wesley S. Shaner | Commodore |
| A. H. Oja        | Secretary |

| Boat        | Owner                                |
|-------------|--------------------------------------|
| Al's Pal    | Allen H. Larson                      |
| Bee & Bee   | A. W. Johnson                        |
| Beverly G.  | Albin P. Anderson                    |
| Blue Heron  | Ernest P. Hayes                      |
| Bonnie J.   | Nick Kussman                         |
| Buddy       | A. H. Oja                            |
| Bunny I.    | Ralph W. Beaty                       |
| Carry On    | R. M. Smith                          |
| Cheerio     | E. T. Edison                         |
| Dog House 2 | John H. Kilpack<br>and Robert Lovell |
| El Dandee   | Fred Haroor                          |
| Elfin       | Dr. Clyde Parlova                    |
| Fada        | Al Downs                             |
| Falcon      | J. C. Johnson                        |
| Hawkeye     | Robert A. Hawkins                    |

|               |   |
|---------------|---|
| Ida Mae       | J. W. Jarvis  |
| Jan-Ron       | Don V. Johnson  |
| JeDaWe        | Wesley S. Shaner,<br>Gerald Phillips and<br>Dave Shaner |
| Jela          | Larry Snyder  |
| Joan          | Kenneth Noll  |
| Judy B.       | Gordon Branthover                                       |
| Karen E.      | Capt. F. S. Elfving                                     |
| Laurelyn      | E. G. Griffith  |
| Little Beaver | Forrest LaBeck  |
| Little Bit    | Clyde Branthover  |
| Little Mo     | Henry J. Kaufman  |
| La-Mar        | Charles B. Mabry  |
| Madam Queen   | Ernest Kerola   |
| Maria         | Bruce A. Thomas   |
| Maybe         | Cliff May   |
| Melrose       | Malvin Sorenson   |
| Merrily       | Dr. George H. Thomas                                    |
| Michael       | Charles Macy  |
| Michael       | Albert Borkik   |
| Mule Dozer    | Bob Larson  |
| Myrda         | John D. Lawson  |
| Peggy         | Arne Jylha  |
| Ruth E.       | Merrill Ginn and<br>Bud Clark                           |

|              |                                    |
|--------------|------------------------------------|
| Sans Souci   | Cameron C. Butte<br>and Al Crohn   |
| Sarah Sue    | Axel R. Englund and<br>Orval Eaton |
| Seabreeze    | Dr. Robert Nelkes and<br>Jack Reed |
| Skippy       | Edward Salomonsen                  |
| Susan D.     | L. W. Trenholm and<br>R. L. Hughes |
| Trudy E.     | Philip J. Weinstein                |
| Valouris     | J. H. Kelly                        |
| What-A-Man 2 | Bill Reed                          |

#### BONNEVILLE YACHT CLUB

P.O. Box 692

Bonneville, Oregon

|                    |           |
|--------------------|-----------|
| Clarence J. Haight | Commodore |
| Frank J. Holzgang  | Secretary |

| Boat     | Owner           |
|----------|-----------------|
| Cascade  | W. F. Seymour   |
| Chicadee | C. A. Robertson |
| Maritime | H. L. Leach     |



Megohm..... H. W. Griffith  
Oncosta..... Clarence J. Haight  
Osprey..... R. A. Welch  
Pameia..... Jack J. Corcoran

### COLUMBIA RIVER YACHT CLUB

7919 N.E. Marine Drive  
Portland, Oregon

W. L. "Bill" Marsh Commodore  
K. H. Brookes Sec'y-Treas.

| Boat           | Owner              |
|----------------|--------------------|
| Allice R.      | J. Rosenthal       |
| Alma J.        | Geo. Johnston      |
| Amigo II       | S. A. Battaglia    |
| Annabelle      | C. W. McGee        |
| Bee & Bee      | A. W. Johnson      |
| Betty B.       | Floyd Bay          |
| Biff II        | M. D. Westover     |
| Bill-Li        | W. H. Crossley     |
| Boge           | Robt. Howard       |
| Bonnie G.      | Joe Gilray         |
| Bull Frog      | W. H. Smith        |
| Capri          | A. B. Crum         |
| Cat Boat       | Dr. D. Pitcairn    |
| Champion       | C. Perkins         |
| Charlie        | Chas. Ulrich       |
| Charlie Martin | Dr. C. Yost        |
| Chastina       | M. Glanz           |
| Clancy         | Ed Hargrave        |
| Clint'n Kay    | C. C. Fleet        |
| Collins        | Fred Collins       |
| Comanche       | R. Kennedy         |
| Crystal R.     | W. L. Rueppell     |
| Cub            | G. E. Lyons        |
| Dan Flo.       | H. Daniel          |
| Danny Bruce    | N. L. Ellis        |
| Denny Pat      | L. A. Perkins      |
| DerJean        | D. H. Bussard, Jr. |
| Doray          | Dr. R. R. Roy      |
| Dor Kay        | Dr. Chris Kisky    |
| Dorothy K.     | A. N. Kulberg      |
| Duchess        | V. Powell          |
| Elaine B.      | H. Barnard         |
| Enid III       | Otto Houk          |
| Eriena         | Earl McCuddy       |
| Escape         | G. P. Smith        |
| Four Ways      | Wm. Way            |
| Gallary        | C. Lundberg        |
| Georgina II    | Cliff Andrus       |
| Gillie         | W. L. Kays         |
| Gisela         | W. G. Peterson     |
| Good E Nuff    | A. Nelson          |
| Graying        | W. L. Marsh        |
| Helen          | F. Tuffs           |
| Helen B.       | H. Brookes         |
| He-Li          | H. Heddon          |
| Honey          | L. Armstrong       |
| Impulse        | G. Green           |
| Jade           | T. Gevaart         |
| Jedaba         | D. Weiner          |
| Jo-An          | A. W. Bryant       |
| Joanne         | R. Montgomery      |
| Joe Dodge      | Wayne Nagle        |
| Kazan          | R. Sells           |
| Kentucky       | Dr. H. Atwood      |
| Kittiwake      | V. Kuykendall      |
| Klick-Tat      | S. Durkheimer      |
| Kruse On       | F. Kruse           |
| Leigh Ora      | H. Hess            |
| Lillian        | W. C. Cooper       |
| Little Toot    | F. Jamerson        |
| Luray          | Ed Jewett and      |
|                | R. B. Henry        |
| Maldwyn        | Lee Karr           |
| Marcus Gee     | M. Gerlack         |
| Marge Lee      | F. G. Swenson      |
| Margie B.      | Lester Beckman     |
| Marlee         | Wm. Cooney         |
| Marlin         | R. H. Kelley       |
| Marted         | E. J. Sheahan      |
| Mary L.        | A. Lovering        |

|                       |                    |
|-----------------------|--------------------|
| Merigetta             | D. M. Shaw         |
| Merry Lou             | Dr. F. Hunter      |
| Merry-Mac             | H. McNeil          |
| Midnite               | Dr. C. A. Hurley   |
| Misbehavin            | D. Ownbey          |
| Miss B II             | Dean Bryson        |
| Nancy De              | Harry Tucker       |
| Nellie D.             | R. McLaughlin      |
| Norm Andy             | C. O. Anderson     |
| Onandel               | T. W. Schaefer     |
| Patken                | W. Kenney          |
| Patricia-Ann          | R. Palitzsch       |
| Penny Lee             | Dr. G. Lage        |
| Periwinkle            | B. Woodyard        |
| Pintail               | K. Birkemeier      |
| Polaris               | F. Riverman        |
| Poo Too               | Don Stout          |
| Princess Annette      | A. Pearson         |
| Rambler               | L. Barber          |
| Ranger                | A. Schmid          |
| Rebecca of Sunnybrook | J. Sinner          |
| Rite Rx               | Dr. Geo. Guldager  |
| Rubaiyat              | Orville Smith      |
| Sea Dress             | Dr. D. B. Seabrook |
| Sea Lark              | H. I. Garrabrant   |
| Sea Sand              | Dr. S. F. Crynes   |
| Sea Wolf              | W. Selover         |
| Shasta                | J. Martin          |
| Slug II               | P. Dick            |
| Spunky II             | H. Linn            |
| Susie Q               | J. Lineham         |
| Tashmoo               | Dr. J. Hutton      |
| Theima                | E. L. Colver, Jr.  |
| Tile It               | H. Lewis           |
| Time Out              | Dr. P. H. Starr    |
| Vagabond              | F. Pittard         |
| Vesta Lee             | Lee Clyde          |
| Virginia Lee          | Jack Harroun       |
| Water Wagon           | L. Persing         |
| Willmellu             | W. Lauer           |
| Winifred J.           | A. James           |
| Yellow Jacket         | H. E. Gregg        |
| Yours Truly           | T. Lineham         |

### COLUMBIA RIVER YACHTING ASSOCIATION

Robert H. Calef..... President  
6325 N. Missouri Ave.  
Portland, Ore.

Floyd H. Bay..... Vice-President  
3424 N.E. 25th Ave.  
Portland, Ore.

Robert A. Smith..... Secy.-Treas.  
1825 N.E. Fremont St.  
Portland, Ore.

### COOS BAY YACHT CLUB

Post Office Box 286

Coos Bay, Oregon

Dr. Demonic Megale Commodore  
Leigh Lyon..... Secy.-Treas.

| Boat          | Owner              |
|---------------|--------------------|
| Adios         | Bob Sheedy         |
| Bee           | George Vaughn      |
| Easter Sunday | C. P. MacNab       |
| Furious       | Leo Frisk          |
| Ginger        | Edsall Hodge       |
| Hoddy         | Fred Schepman      |
| Irish         | Ken Ireland        |
| Lena          | Dr. Demonic Megale |
| Pelican       | Curtis Nagle       |
| Sea Duty      | M. O. Littrell     |
| Shower        | Elmo Gorbott       |
| Southpaw      | Mack Barber        |
| Stormy        | Carl Damm          |
| Susan         | Leigh Lyon         |
| Tupie         | Frosty West        |
| Wego          | R. L. Bickett      |
| Yabsooc       | H. W. Greaves      |

### DEVIL'S LAKE YACHT CLUB

Box A-A

Delake, Oregon

George Calkins..... Commodore  
Wilma Calkins..... Secretary

| Boat        | Owner                           |
|-------------|---------------------------------|
| Ermintrude  | Chester Miller                  |
| Gary-Lyn    | Clair Floyd and<br>John Pizutti |
| Louise      | Lloyd Calkins                   |
| Miss Toledo | Carl Detmering                  |
| My Gal      | Ted (Rocky) Stone               |
| Suzq Q      | Joe Dolan                       |
| Snipe       | Dorothy Kerr                    |

### EUGENE YACHT CLUB

Fern Ridge Lake  
Eugene, Oregon

Dr. E. D. Furrer..... Commodore  
Victor R. Walder..... Sec'y-Treas.

1375 W. 11th Ave.  
Eugene, Oregon

| Boat              | Owner                               |
|-------------------|-------------------------------------|
| Adabelle          | R. Bench                            |
| Al-Gee            | A. C. Stockstad                     |
| Almarie           | M. Batchelor                        |
| Annette           | R. Paden                            |
| Baby              | R. Wise                             |
| Betsy C.          | H. G. Chickering, Jr.               |
| Blondie           | Paul Hunter                         |
| Bobber            | R. F. Schulz                        |
| Brown Bomber      | D. Smith                            |
| Chick             | L. W. LaBare                        |
| Chlo-E            | G. V. Chasman                       |
| Dolly Too         | Dr. E. D. Furrer                    |
| Donralee          | T. A. Stocker                       |
| Dreamboat         | Victor R. Walder                    |
| Eddie B. &        |                                     |
| Eddie B. Jr.      | E. L. Bennett                       |
| Ed-Rita           | E. C. Ordway                        |
| Elaine            | U. W. Ellmaker                      |
| Elveta III        | C. Poole                            |
| Fiat Foot         | R. Stocker                          |
| Guaty             | B. Forney                           |
| Holiday           | C. F. Johnson                       |
| Humboldt          | P. C. McGovern                      |
| I Dood It         | F. K. Davis                         |
| J and J           | H. T. Wiltshire                     |
| Jani-Kaye         | Chas. E. Edwards                    |
| Jay Dee           | J. D. Mills                         |
| Jay Whizz         | Dr. L. T. Campbell                  |
| L. K. S.          | T. Smith                            |
| Marg-Etta         | R. Fraser                           |
| Miss Eugene II    | D. Wilfert                          |
| Miss Fortune      | E. E. Colloombo<br>and H. C. Potter |
| Nip               | J. A. Tiffany                       |
| Prowler           | E. Piquet                           |
| Prowler           | Walton Page                         |
| Red Wing          | Dr. J. E. Scofield                  |
| Reluctant Tadpole | W. J.<br>Wheeler                    |
| Reno II           | Noel Pirtle &<br>R. Jarnagin        |
| Rum Dum           | E. F. Deardorff                     |
| Senga             | Harold Shaw                         |
| Sharky            | Ray Nelson                          |
| Snooper           | H. J. Jones                         |
| Star Dust         | George Gazeley                      |
| Swan              | Nick ZenZen                         |
| Tern              | T. Korn                             |
| Vendovi           | A. F. Richards                      |
| Virginia J.       | J. Naasholm                         |
| Walita            | W. LaDusire                         |
| Windrush II       | K. Blanding                         |
| Zombie            | M. L. Stewart                       |



**NEWBERG BOAT CLUB**

A. B. Christie.....Commodore  
 Gelene Hills (Mrs.).....Secretary  
 115 E. 3rd St.  
 Newberg, Ore.

**OREGON OUTBOARD  
ASSOCIATION**

Bt. 3, Box 678  
 Salem, Oregon

Elmer Knight.....Commodore  
 Frances Eyerly.....Secy.-Treas.

**OREGON YACHT CLUB**

The Oaks Park  
 Portland, Ore.

Virgil Cooper.....Commodore  
 Elsie Lachmund.....Secretary

**PENDLETON BOAT CLUB**

McKay Dam, Highway 395  
 Pendleton, Ore.

Clarence Mumford.....Commodore  
 Henry Hess.....Secretary

**PORTLAND YACHT CLUB**

1241 N.E. Marine Drive  
 Portland 11, Oregon

G. Arthur Randall.....Commodore  
 J. B. Kiskey.....Secretary-Treasurer

| Boat              | Owner                     |
|-------------------|---------------------------|
| Ace.....          | Lawrence Barber           |
| Aeolus.....       | D. Winters                |
| Aiene.....        | J. D. Weber               |
| Alma Pearl.....   | Tom Burns                 |
| Alvise D & T..... | Tony Rogers               |
| Argo.....         | Dr. R. N. Jacobs          |
| Argosy.....       | F. L. French              |
| Arrow.....        | A. G. Onslow              |
| Beachcomber.....  | Dr. J. W. Wiley           |
| Behlms.....       | M. A. Zapp                |
| Betty D.....      | Geo. M. Donagh            |
| Blue Water.....   | Carl V. Shoemaker         |
| Bounty.....       | R. C. Hansen              |
| Calboat.....      | Dana E. Jewell            |
| Cavu.....         | J. A. Sprouse             |
| Chantasea.....    | H. C. Nachand             |
| Chetco.....       | C. S. Benson              |
| Chiane.....       | D. R. Gerow               |
| Chris Craft.....  | H. E. Krueger, Jr.        |
| Cimba.....        | Geo. H. Gage              |
| Clauban.....      | Stuart Kerr               |
| CoHo.....         | S. W. Ball                |
| Comet.....        | S. S. Brundage            |
| Composite.....    | M. E. Van Horn            |
| Cookie.....       | R. A. Johnson             |
| Critique.....     | Dwight M. and Earl Didzun |
| Day Dream.....    | F. C. Ralph               |
| De De Jo.....     | C. B. Wegman              |
| De Etta.....      | K. E. Rodgers             |
| Delite.....       | T. C. Luke                |
| Diane.....        | Wilford C. Keeler         |
| Diane.....        | W. A. Cole                |

Ditty.....Elmer N. and Robt. H. Caley

|                   |                                  |
|-------------------|----------------------------------|
| Dolphin.....      | W. J. Cottrell                   |
| Donamarie.....    | D. Clearwater                    |
| Donna Lee II..... | J. L. Kennedy                    |
| Edrene.....       | Dr. W. C. Reiner                 |
| Elaine B.....     | Harvey Bernard                   |
| Ellisea.....      | Wm. P. Ellis                     |
| Elsie B.....      | B. H. Hunter                     |
| Endeavour.....    | Amos Burg                        |
| Escape II.....    | H. D. Leffingwell                |
| Eva May.....      | P. F. Schatz                     |
| Evening Star..... | E. W. DeKonig                    |
| Evening Star..... | M. B. Henderson                  |
| Fair Tide.....    | D. O. DeGross                    |
| Fanjasy.....      | Carl A. Rasmussen                |
| Flatlie.....      | Edward Arnold                    |
| Flatlie.....      | Harry F. Beik                    |
| Flatlie.....      | C. A. Fick, Jr.                  |
| Flatlie.....      | Meredith L. Fisher               |
| Flo Art.....      | A. A. Rodda                      |
| For-O-Vua.....    | G. A. Randall                    |
| Forale.....       | Robt. L. Nelson                  |
| Franses.....      | V. D. Gooley                     |
| Gay Ann.....      | Don C. Larimer                   |
| Gaylee.....       | J. D. Trullinger                 |
| Gee Bee III.....  | C. E. Gunderson                  |
| Georgia Lee.....  | Howard Cunningham                |
| Gerry K.....      | Dr. H. A. Krumbeln               |
| Glady.....        | J. M. Harder                     |
| Gloria Marie..... | C. A. Fick                       |
| Gravy.....        | Francis I. and Gilbert G. Cheney |
| Graywin.....      | W. P. Yaw                        |
| Gremlin.....      | Donald A. Schafer                |
| Gypsy Queen.....  | E. R. R. L. and W. W. McCulloch  |
| Gyrette.....      | G. V. Shaw                       |
| Hallie K.....     | R. P. Dixon                      |
| Harbinger.....    | R. T. Catlin                     |
| Holiday.....      | D. MacGregor                     |
| Hunna.....        | Frank Nau                        |
| Huntress.....     | N. W. Hunter                     |
| Janie.....        | D. A. Schafer                    |
| Jeanie-Eie.....   | Eugene D. Davidson               |
| Jojo.....         | H. W. Irwin                      |
| Kamanshe.....     | H. B. Pratt                      |
| Karen B.....      | Geo. A. and Warren W. Braley     |
| Kazonie.....      | R. E. Sells                      |
| Kornall.....      | C. W. Kellogg                    |
| Kyuse.....        | H. B. Pratt                      |
| Lady Luck.....    | L. E. Moore                      |
| Lady Vee.....     | C. D. Ray                        |
| Loafer.....       | Hugh Van Allen                   |
| Luna.....         | C. S. Francis                    |
| Marcia M.....     | J. W. Mayo                       |
| Marcy II.....     | C. R. Jones                      |
| Mar-Ge-Lee.....   | L. V. Manthe                     |
| Margie.....       | G. A. Francis                    |
| Mighty Mite.....  | J. E. Johnson                    |
| Monitor.....      | J. W. McCrea                     |
| Nan-Bar.....      | R. C. Chamberlin                 |
| Nancy Ann.....    | Dr. L. W. Dickinson              |
| Nantucket.....    | Wayne Aiken                      |
| Niad.....         | E. E. McIntosh                   |
| Nina.....         | T. J. White                      |
| Nirvana.....      | V. A. Cartwright                 |
| No Name.....      | C. W. Pecore                     |
| Northwind.....    | Asel C. Eoff                     |
| Omar.....         | J. F. Francis                    |
| Ospray.....       | Edwin Sandberg                   |
| Ott's Yott.....   | I. E. Ott                        |
| Patty Ann II..... | Stafford G. Jennings             |
| Periwinkle.....   | Bart Woodyard                    |
| Phantom.....      | S. S. Wilcox                     |
| Pipe Dream.....   | E. J. Green                      |
| Pixie.....        | Harvey Jordan                    |
| Pourquia.....     | F. E. Battaglia                  |
| Power.....        | Harold Koppang                   |
| Rambler.....      | Lawrence Barber                  |
| Ranger.....       | John T. Whitlala                 |
| Redwin.....       | Edwin C. Davis                   |
| Rejo.....         | S. R. Smith                      |
| Relax.....        | L. R. Huesa                      |
| Ripple.....       | Melville B. Brown                |

|                    |                                 |
|--------------------|---------------------------------|
| Scotty.....        | R. Bruce McComb                 |
| Sea Lark.....      | R. P. Woodbury                  |
| Sea Urchin.....    | Richard M. Beggs                |
| Shella-Ann.....    | J. F. Grieg                     |
| Sigame.....        | Jack S. Elliott                 |
| Silhouette.....    | Geo. F. Brice, Jr.              |
| Simcoe.....        | L. C. Jones                     |
| Skeeter.....       | D. R. Gerow                     |
| Spindrift.....     | L. T. Ordeman                   |
| Starlite.....      | Claude F. Butler                |
| Stormaloug.....    | J. E. Finke                     |
| Sue-Lin.....       | D. L. Peters                    |
| Sue-Mac.....       | E. R. R. L. and W. W. McCulloch |
| Suma-Toch.....     | George Weber                    |
| Sunbeam.....       | Alton H. Alexander              |
| Susy Q.....        | M. A. Smith                     |
| Swan.....          | B. W. Morehouse                 |
| Swoose.....        | C. S. Thayer                    |
| Teaser.....        | R. A. Smith                     |
| Tel-Ves.....       | C. A. White                     |
| Tempus Fugit.....  | S. M. Vranon                    |
| The Rogue.....     | H. B. Krueger, Jr.              |
| Thumper.....       | Ray C. Hansen                   |
| Thunderbird.....   | E. S. Stinson                   |
| Tillicum.....      | Floyd O. Smith                  |
| Toby.....          | F. M. Phogso                    |
| Tom-Tom.....       | Duane Austen                    |
| Tonga.....         | William H. Cook                 |
| Trident.....       | A. M. Meen                      |
| Tripper No. 1..... | D. V. Jennings                  |
| Tuna Clipper.....  | Thomas Austen                   |
| Tyee.....          | Thomas C. Luke                  |
| Vagabond.....      | Dr. E. W. St. Pierre            |
| Valepenade.....    | Dr. Geo. W. Bendshader          |
| Vim.....           | Dr. Geo. W. Cottrell            |
| Vorlag.....        | Ernest G. Swigart               |
| Wa-Lu.....         | W. L. Blah                      |
| Wanderer.....      | J. W. Kiskey                    |
| Wanderer.....      | G. R. Metsher                   |
| Webfoot.....       | John Dierdorff                  |
| Whitecap.....      | C. M. Nelson                    |
| Wild Wind.....     | Dr. John H. Mills               |
| Wind Rush.....     | Dr. Wallace Haworth             |
| Winifred J.....    | Arthur T. James                 |
| Yankee Doodle..... | Duane Vergery                   |
| Yo Ho.....         | John L. Williams                |
| Yumma Pearl.....   | Frank Russo                     |
| Zephyr.....        | J. W. Fish                      |

**ROSE CITY YACHT CLUB**

7303 N.E. Marine Drive  
 Portland 13, Ore.

Wade W. Cornwell.....Commodore  
 Evans Davis.....Sec'y-Treasurer

| Boat              | Owner                |
|-------------------|----------------------|
| Agnes III.....    | Ed H. Lundberg       |
| Becada III.....   | Dave Young           |
| Billiko.....      | Frank A. Koehler     |
| Black Jack.....   | Elmer Linstad, Jr.   |
| Blitz.....        | Wm. Oekerman         |
| Bonnie Bee.....   | George H. Riggs      |
| Breeze.....       | Harold B. Saunders   |
| Chatcolet.....    | Chas. Sorenson       |
| Clare Mar.....    | C. J. Gates          |
| Cygnus.....       | Chester A. Wheeler   |
| Dolores.....      | Edward Caldwell      |
| Duchess.....      | Dorothy Knoll        |
| Ecstasy.....      | T. T. Smith          |
| Eight Bells.....  | Patrick Higgins      |
| Elvera.....       | James B. Piland      |
| Estrelita.....    | Eric E. Kangas       |
| Evening Star..... | E. W. De Koning      |
| Fay.....          | A. N. Wilcox         |
| Frolic.....       | Dr. John A. Kemano   |
| Gary Anne.....    | E. M. Schuster       |
| Gemini.....       | Jack Wheeler         |
| Gillie.....       | B. L. Kays           |
| Gra-Bob.....      | R. E. Ellinwood, Jr. |
| Green Frog.....   | Forbes J. Mack       |
| Iron Maid.....    | Harry G. Brault      |

|              |                     |
|--------------|---------------------|
| Jorjet       | John H. Hilton      |
| Kathleen     | William B. Gruetter |
| Kayrun       | Carl Stromsen       |
| Keith        | A. E. Countryman    |
| Lucky M.     | Leon K. Martini     |
| Njord        | Geo. W. Sutton      |
| Nohola II    | John H. Huber       |
| Oui-Oui      | Ray Brunkow         |
| Pajarita     | Helen M. Bird       |
| Rantha V.    | Keith Vincent       |
| Rock 'N' Rye | John T. Schneider   |
| R-Own        | Elton M. Fannon     |
| Saranello    | K. C. Owen          |
| Sivad II     | Herb R. Davis       |
| Skiddaddle   | Evans Davis         |
| Spanker      | Wade W. Cornwell    |
| Susan A.     | Stuart Davis        |
| Tamara       | Tom W. Green        |
| Tern         | E. L. Nutter        |
| Vega         | Harold E. Spoelstra |
| We're Here   | Edw. H. Cameron     |
| Yafta        | Russell Rogers      |

### RIVERSIDE YACHT CLUB Canby, Oregon

|                  |              |
|------------------|--------------|
| Claire Haines    | Commodore    |
| Nancy Lamb       | Sec'y-Treas. |
| Route 3, Box 390 |              |
| Canby, Oregon    |              |

| Boat          | Owner        |
|---------------|--------------|
| Buttons       | Button Bros. |
| Dianna        | F. Stefani   |
| Gypsy II      | R. B. Lamb   |
| Bound Dog III | K. Trent     |
| Lamzy         | C. R. Lamb   |
| Lurky         | C. C. Lamb   |

|                  |                 |
|------------------|-----------------|
| Punkin Seed      | R. B. Hale      |
| Senlah           | C. Haines       |
| Skipper          | J. L. Trethaway |
| Will-of-the-Wind | J. Grossman     |

### SOUTHERN OREGON BOAT CLUB, INC.

2 Miles Above Savage Rapid  
Dam on Rogue River  
Ashland, Oregon

| Harold Littrell              | Commodore                      |
|------------------------------|--------------------------------|
| D. J. Wilcox                 | Secy.-Treas.                   |
| c/o Rogue Valley Marine Co.  |                                |
| Boat                         | Owner                          |
| Aljoy                        | Weston Fowler & Jack Welch     |
| Aurora                       | Jack Pellett                   |
| Boat Builder                 | Cecil Owen                     |
| Fisherman                    | John Detweiler                 |
| Golden Gull                  | Claude Hoover                  |
| Hiball                       | Hal Skinner                    |
| Hoo-Hoo M. W. & E. E. McGrew |                                |
| Immigrant                    | H. U. Mitchell                 |
| Jeanne J.                    | Harold Littrell                |
| Moies                        | Robert Lee & Richard Mole      |
| Owner of 7 Boats             | Jack Moad                      |
| P & F                        | Frank Fawcett & Carroll Poe    |
| Silver Eagle                 | C. C. Nicholson & D. J. Wilcox |
| Three Mises                  | Jeff Dennis & Nick DeWitt      |
| Tid Bit                      | Bill Blackledge                |
| Unknown                      | Arnold Bohnert                 |
| Unknown                      | Duke Cleveland                 |

### SOUTHWESTERN OREGON MOTOR BOAT ASSOCIATION

Coss Bay, Ore.

|                  |           |
|------------------|-----------|
| Carl Damm        | President |
| 920 Lombard St.  |           |
| North Bend, Ore. |           |

|                |           |
|----------------|-----------|
| Fritz Davison  | Secretary |
| Billards Route |           |
| Coquille, Ore. |           |

### YAQUINA BAY YACHT CLUB

Newport, Oregon

|                    |              |
|--------------------|--------------|
| J. E. Wright       | Commodore    |
| Robert C. Crawford | Secy.-Treas. |

| Boat         | Owner             |
|--------------|-------------------|
| Doris        | J. R. Odell       |
| Eight Ball   | J. E. Wright      |
| Ermie        | Alfred Stanley    |
| Leprechaun   | Jim Foller        |
| Mary Karen   | Carl Staats       |
| Miskil III   | Andy Holbrook     |
| Northwind    | Asel C. Eoff      |
| Norwester    | Robert C. Starr   |
| Oh Gee       | Bill Gribier      |
| Pearl Harbor | W. S. Hunter, Jr. |
| Ruth R.      | Robert C. Starr   |
| Sea Grub     | Lawrence E. Hofer |
| The Dons     | Donald A. Young   |
| The Thing    | R. C. Crawford    |

# British Columbia Yacht Clubs

### BURKARD YACHT CLUB Stanley Park Vancouver, B. C.

|                |           |
|----------------|-----------|
| S. R. Maddison | Commodore |
| K. Bramall     | Secretary |

| Boat          | Owner          |
|---------------|----------------|
| Adarene       | G. Horner      |
| Agnes, R. I.  | F. E. Reed     |
| Alern         | E. A. Phillips |
| Alliea        | G. M. Phillips |
| Alice Lynne   | D. J. Wright   |
| Aloha         | J. G. Williams |
| Alondra       | E. J. Cook     |
| Amanha        | H. Proctor     |
| Amigo         | S. A. Blaney   |
| Anita Joyce   | A. R. Black    |
| Aryne         | S. E. Andrews  |
| Betnan Bill   | C. W. Goodrich |
| Betty-Lou     | A. E. Anderson |
| Blithe Spirit | T. D. Fenner   |
| Blue Boy      | T. C. Littler  |
| Blue Iris     | J. H. Allan    |
| Bob-Rob       | S. A. Bowman   |
| Cairdeas      | J. Boyd        |
| Cassandra     | A. Scotland    |
| Cavalier      | R. C. Caverly  |
| Charita       | Dr. C. S. Dawe |
| Chillon       | F. D. Pratt    |
| Clair De Lune | E. L. Ledrew   |
| Crethaven     | J. Freer       |
| Dolphin       | E. E. Dubeau   |
| Double J.     | J. J. Astell   |

|                |                    |
|----------------|--------------------|
| Dyne           | J. C. Heelas       |
| Faustina       | Wm. Adamson        |
| Flagan         | W. P. Hagerty      |
| Friendship     | John Boyd          |
| Geradon        | J. R. Nesbitt      |
| Go Getter      | C. G. Roe          |
| Graceine       | J. P. Watts        |
| Green Hornet   | Don McKenzie       |
| Haldicon       | H. C. Becker       |
| Harmony        | W. R. Watson       |
| Janra          | S. R. Maddison     |
| Jaro           | Dr. L. F. Marshall |
| Jeanette       | O. D. McBride      |
| Klee Wyck      | I. B. McKay        |
| Lady Anne II   | R. H. Harris       |
| Lady Bountiful | E. I. Bird         |
| Laura I        | K. Bramall         |
| Leisure        | W. E. Wright       |
| Lilley Dink    | S. H. Lilley       |
| Lorna May      | C. D. Tweedale     |
| Lougee         | R. M. Robertson    |
| Lucky VII      | W. E. Shannon      |
| Malpeque       | J. C. Woodside     |
| Mamo           | C. W. Leggatt      |
| Marelen        | R. H. Rankine      |
| Maridaph       | M. E. Howe         |
| Maristan       | L. W. Bradbury     |
| Marnez         | H. Lucas           |
| Marni          | H. Skelding        |
| Mauluday       | W. S. Greer        |
| Melampus       | J. Vince           |
| Mercury        | B. F. Dalgeish     |
| Mersel         | H. G. Selman       |
| Mistral        | J. W. McDonald     |
| P. M. L. 3     | E. Allan           |

|              |                  |
|--------------|------------------|
| Perrata      | R. C. Ellert     |
| Pladda       | T. L. Johnston   |
| Prelude      | R. Wigley        |
| Quest        | O. Cote          |
| Rita         | W. Bromilow      |
| Rogric       | D. W. Duncan     |
| Ruthken      | K. Littler       |
| Sally-Jo     | J. W. Knight     |
| Sal Nor II   | N. E. Wilbey     |
| San Jolin    | J. B. Lister     |
| Sarreta II   | L. R. Mason      |
| Scamper      | G. N. Russell    |
| Sea Biscuit  | M. R. Laidlaw    |
| Sea Holm     | R. B. Kipping    |
| Sea Sprite   | J. E. Wales      |
| Sequin       | A. R. Mark       |
| Silver Spray | D. R. Davis      |
| Sorg V       | R. J. Anderson   |
| Star Rise    | C. E. Northrup   |
| Star Trail   | W. A. Gosse      |
| Susie Q      | S. J. Remnant    |
| Taconite     | W. E. Boeing     |
| Tecora       | F. Deeley        |
| Tempe        | J. F. Lewis      |
| Temptress    | J. H. Michemore  |
| Typhoon      | V. C. Spink      |
| Underwing    | D. Bartels       |
| Valerie II   | F. G. Harrington |
| Victor R.    | S. C. Mullett    |
| Walvermar    | W. W. Lewis      |
| Waverly II   | W. A. Arnold     |
| White Iris   | R. M. Ashby      |
| Wilco        | H. E. Willock    |
| Windsor      | V. C. Spink      |

# CAPITAL CITY YACHT CLUB

Moorings: Canoe Cove  
Victoria, B. C.

V. Griffin.....Commodore  
G. L. James.....Secretary  
1216 Wharf Street  
Victoria, B. C.

| Boat                          | Owner               |
|-------------------------------|---------------------|
| Aleopa.....                   | Jack Lamb           |
| Ambassador IV.....            | R. Broughton        |
| Ambassador IV.....            | H. Morgan           |
| Atlas.....                    | J. A. Bostock       |
| Awaywego.....                 | J. M. Porter        |
| Barbara Too.....              | M. Atkins           |
| Bluefin II.....               | R. A. Lipsey        |
| Cameo.....                    | N. Pindler          |
| Calypso II.....               | S. Roberts          |
| Capo.....                     | F. Ivings           |
| Cesleen.....                  | T. H. Kingscote     |
| Christine II.....             | Dr. C. M. Henry     |
| Claimarioje.....              | M. C. Watt          |
| Clipper.....                  | A. H. Tyrell        |
| Coleen.....                   | C. A. Holloway      |
| Colondrina.....               | E. J. McLaughlin    |
| Colwen G.....                 | O. Corbett          |
| Daisy.....                    | J. W. Brooks        |
| Datopa.....                   | H. J. Sims          |
| Deja.....                     | J. H. McLain        |
| Doreen.....                   | J. T. Hamilton      |
| Dulowna.....                  | O. Fowler           |
| Dyne.....                     | F. H. Harrison      |
| Edna Elaine.....              | Jack D. Smith       |
| Eileen G.....                 | H. Gladfield        |
| Figit.....                    | D. J. Dangerfield   |
| Halcyon II.....               | M. Green            |
| Hermeva.....                  | Dr. H. B. Wood      |
| Hi-Seas.....                  | V. W. Griffin       |
| Irene.....                    | Maj. W. C. Roberts  |
| Isabel L.....                 | R. L. Challoner     |
| Jeanette T.....               | Dr. T. W. Walker    |
| Jericho.....                  | A. W. Whittingham   |
| J. H. & E.....                | E. Hutchinson       |
| Jo-Mar H. C. and H. F. Rogers |                     |
| Josephine.....                | B. W. Davies        |
| Kalitan.....                  | H. R. Johnson       |
| Kitgard.....                  | E. N. Liersch       |
| Koala.....                    | J. Hall             |
| Koala II.....                 | H. Henderson        |
| Ko-Ko.....                    | N. P. Hocking       |
| Lady Domar.....               | T. H. Peacock       |
| Lady Joan II.....             | Dr. W. Sturdy       |
| Lenore.....                   | J. Selkirk          |
| Lillooet.....                 | C. A. Lowe          |
| Looard.....                   | Henry Hoffer        |
| Lucey D.....                  | P. D. Bowes         |
| Mandalay-B.....               | H. B. Olson         |
| Manuaki.....                  | L. Glazan           |
| Mavon.....                    | A. Pednault         |
| Meko.....                     | Dr. V. B. Taylor    |
| Merva.....                    | L. W. Morrill       |
| Midnight Sun.....             | J. Ormond           |
| Moya.....                     | F. H. Francis       |
| Navajo.....                   | R. V. Hocking       |
| Nirvana.....                  | F. B. McLeod        |
| North Star.....               | S. K. Skillings     |
| Onoway.....                   | Lt. Col. M. A. Kent |
| Orwell.....                   | Ken Oliver          |
| Phoenix.....                  | Miss I. Deakin      |
| Phoenix.....                  | C. W. Kinlock       |
| Reina Del Mar.....            | H. S. Davie         |
| Roberta.....                  | R. Halls            |
| Robyn Adair.....              | R. W. Roof          |
| Romax.....                    | J. E. Sewell        |
| Rosjon.....                   | F. C. E. Ford       |
| Saga.....                     | Dr. C. N. Westwood  |
| Sea Haven.....                | H. C. Cross         |
| Sealeave.....                 | G. S. Sparling      |
| Seaway.....                   | E. H. Kolb          |
| Siesta.....                   | P. Pitt             |
| Spartetime.....               | W. N. Grice         |
| Stranger II.....              | E. Lewis            |
| Tejos.....                    | S. Moore            |
| Tethys.....                   | E. Philbrook        |

|                 |                                      |
|-----------------|--------------------------------------|
| The D & D.....  | T. Dickinson                         |
| Thetis.....     | L. MacKenzie                         |
| Totem.....      | J. H. Palmer                         |
| Tryit.....      | R. Williams                          |
| Tum Tum.....    | C. P. Connorton and<br>Glen O. Smith |
| Tuya.....       | L. Mara                              |
| Twin Isles..... | H. L. Sangster                       |
| Vagrant.....    | L. Pelland                           |
| Wasco.....      | D. Moor                              |
| Ysidro.....     | E. H. Henshall                       |
| Zandra.....     | Norman Hill                          |

# KELOWNA YACHT CLUB

Water Street

Kelowna, B. C.

D. L. Hayes.....Commodore  
C. H. Neale.....Secy-Treas.  
Water St., Kelowna

| Boat              | Owner            |
|-------------------|------------------|
| Anwalek.....      | C. G. Renfrew    |
| Awawego.....      | W. J. Ribelin    |
| Banshee.....      | Bruce Paige      |
| Beatrice.....     | S. Turri         |
| Gray Ghost.....   | J. R. Hardy      |
| Hi-Ho.....        | J. Treadgold     |
| Holiday.....      | G. Wilson        |
| Kasamakukas.....  | C. M. Horner     |
| Kia-Oro.....      | D. L. Hayes      |
| Lavella.....      | C. D. Newby      |
| Mercury.....      | E. A. Murchison  |
| Metinota.....     | L. A. C. Pantom  |
| Miss Wuffie.....  | D. M. Black      |
| Ocean Breeze..... | S. H. Johns      |
| Rio II.....       | C. O. Boake      |
| Silver Spray..... | D. G. Loane      |
| Sylvia.....       | S. V. Hubble     |
| Tarpon.....       | G. W. Sutherland |
| Taxi.....         | J. Chambers      |
| Trident.....      | H. T. Mitchell   |
| Trust.....        | John Kitson      |
| Windrift.....     | M. Butler        |
| Yellow Peril..... | A. J. Jones      |

# KITSILANO YACHT CLUB

Foot of Balsam St.

Vancouver, B. C.

Dr. Gordon Hodson.....Commodore  
George Mason.....Secretary

# POWER BOATS

| Boat            | Owner     |
|-----------------|-----------|
| Aleta.....      | M. Wilson |
| Cubrum.....     | A. Quinn  |
| Leilani II..... | D. Smith  |
| Nola-Deen.....  | R. Smith  |
| Venture.....    | F. Stow   |

# SAIL BOATS

|                    |               |
|--------------------|---------------|
| Astrea.....        | D. Shafer     |
| Astrea.....        | R. Wood       |
| Black Hawk.....    | E. Marsden    |
| Bonnie.....        | L. Varty      |
| Carina.....        | E. Young      |
| Cherokee.....      | T. Varty      |
| Coric.....         | A. Cleaver    |
| Comanche.....      | D. Newton     |
| Crusader.....      | B. Roultstone |
| Cygnel.....        | B. Oliver     |
| Dolphin.....       | D. Boyce      |
| Downbeat.....      | Eric Cant     |
| Drumbule.....      | J. Dunlops    |
| Dusky.....         | R. Stevens    |
| Duz.....           | S. Davies     |
| Duz.....           | T. Varty      |
| Flamingo.....      | P. Leslie     |
| Flyin' Dragon..... | W. Gyles      |

|                     |               |
|---------------------|---------------|
| Flying Saucer.....  | G. Hill       |
| Fiving Scot.....    | N. Park       |
| Flying Tiger.....   | N. Sibson     |
| Frisky Miss.....    | C. Williams   |
| Ghost.....          | M. Hunt       |
| Green Dolphin.....  | Walt Chambers |
| Hideaway.....       | G. Hodson     |
| High Flite.....     | W. Mackie     |
| Hotspur.....        | A. Tryce      |
| Hotspur.....        | D. Williamson |
| Iris.....           | E. Wilkes     |
| Jacita.....         | J. McDonald   |
| Jollifou.....       | A. Maslow     |
| Kelpie Queen.....   | N. Clyne      |
| Larmer.....         | L. Hillman    |
| Little Poacher..... | R. Kirkland   |
| Little Toot.....    | D. Shafer     |
| Marina.....         | E. Pennell    |
| Menace.....         | J. Gemmell    |
| Mine Alone.....     | R. Stevens    |
| Pat.....            | A. Sherlock   |
| Puss Kat.....       | W. Woodley    |
| Rebel.....          | R. Anderson   |
| Red Witch.....      | W. Many       |
| Sea Jet.....        | B. Davis      |
| Silhouette II.....  | W. Lindsay    |
| Silver Heels.....   | T. Buckham    |
| Spinaway.....       | D. Bletsoe    |
| Stout Fella.....    | D. Meers      |
| Sunbeam.....        | K. Hunter     |
| Tequilla.....       | R. Peters     |
| Tic Tac.....        | N. McLehlan   |
| Tom Boy.....        | H. Barnes     |
| Totem.....          | C. Helmer     |
| Triveda.....        | L. Murrell    |
| Twin Sails.....     | E. Bales      |
| Warrior.....        | J. Green      |
| Wetazel.....        | C. Harris     |
| Whani Whani.....    | C. Harney     |
| Whiporwill.....     | W. Manson     |
| Wisp.....           | G. Mason      |

# KOOTENAY LAUNCH CLUB

West Arm of Kootenay Lake  
Josephine St., Nelson, B. C.

L. F. Gilbert.....Commodore  
Guy S. Mayo.....Secretary  
619 Mill Street  
Nelson, B. C.

# NANAIMO YACHT CLUB

Nanaimo, B. C.

Noel E. Thompson.....Commodore  
Geo. F. Wilson.....Secretary

# POWER BOATS

| Boat                           | Owner            |
|--------------------------------|------------------|
| Aldon.....                     | Dr. A. W. Bowles |
| Alleen.....                    | G. H. Patton     |
| Angwan II.....                 | R. H. Dunsmore   |
| Betsy.....                     | J. Grassick      |
| Biker.....                     | Stan Blackburn   |
| Bonny Dundee.....              | C. Edgington     |
| Comrade.....                   | C. H. Bollin     |
| Crest.....                     | A. Rowledge      |
| Dawn.....                      | J. Stevens       |
| Dawn II.....                   | E. Butcher       |
| Dawn IV.....                   | A. W. Kennedy    |
| Diana Van Dr. F. R. Van Gilder |                  |
| Dream.....                     | A. Harding       |
| Foray.....                     | Jim Allan        |
| Gale.....                      | C. H. Medler     |
| Green Seas.....                | O. H. Paulson    |
| Icarus.....                    | W. E. Cannavan   |
| Jeran.....                     | C. Dawkin        |
| Jimbar.....                    | N. Thompson      |



|              |                   |
|--------------|-------------------|
| Jolly-Mac    | Ed Dermott        |
| Lady Ann     | Geo. Tuddenham    |
| Lady Luck    | A. C. Whitehouse  |
| Latona       | Chas. Lenhart     |
| Midge        | A. H. Shotbolt    |
| Nan          | A. M. Russell     |
| Ogunquit     | S. V. W. Isaacson |
| Patea II     | H. D. Laird       |
| Perilla      | H. Schwarze       |
| Philomar     | C. W. Swanson     |
| Quandry      | S. M. Saunders    |
| Rosarita     | R. F. Kaltenbach  |
| Sequoia      | E. W. Hott        |
| Shag         | F. Foster         |
| Shangrila    | A. Bell           |
| Sheju        | A. McAllister     |
| Tang         | Geo. Kelly        |
| Texada Queen | G. Dougan         |
| Thella       | A. Craig          |
| Waiaia       | R. Alexander      |
| Wenlyn       | W. Low            |
| Whirlaway    | W. F. Mathews     |
| Willerwin    | W. W. Nash        |
| Zephyr       | A. R. Glen        |

## SAIL BOATS

|                |                  |
|----------------|------------------|
| Blue Heron     | Dr. C. C. Browne |
| Eldorado       | B. R. Abrams     |
| Fury           | R. W. Maki       |
| Gypsy Lass     | D. Isaacson      |
| Mee Too        | L. H. Hinton     |
| Nifty          | A. Knight        |
| Southern Cross | Al Casserly      |
| Thalassia      | J. A. Espitalier |
| Typhoon        | J. A. Crossan    |
| Zodiac         | A. B. Cleveland  |

## OCEAN FALLS YACHT CLUB

## Ocean Falls, B. C.

|                 |           |
|-----------------|-----------|
| Jack Cochran    | Commodore |
| D. W. MacDonald | Secretary |

| Boat         | Owner           |
|--------------|-----------------|
| Ahti         | A. Cadorn       |
| Ariene T.    | McCormick       |
| At Last      | J. A. Robinson  |
| Beach Comber | D. Meldrum      |
| Berardell    | W. Ahola        |
| Blodwyn      | N. Lee          |
| Blue Goose   | J. Sutton       |
| Bonnie Ann   | E. Colton       |
| Buccaneer    | W. Calhoun      |
| Buddy        | Orin Hubert     |
| Carmona      | M. Mohyla       |
| Charmer      | S. Young        |
| Discovery    | J. Wainwright   |
| Dolphin      | C. Dennis       |
| Eight Ball   | E. Barclay      |
| Elmena       | J. Torrance     |
| El Ruth      | T. Mullins      |
| Fairy Maid   | J. Kilgour      |
| Fay Low      | B. Seideman     |
| Gunhide      | G. Harmon       |
| Gwen Dee     | Geo. Lee        |
| Ivic         | O. Weber        |
| Jacqueline   | N. Davis        |
| Judy         | G. Anderson     |
| Kathy        | N. Danahin      |
| Lady Byron   | J. Humphries    |
| Lady Eileen  | B. Clozza       |
| Lagger       | J. Gregson      |
| Lal Rae      | Bud Hutton      |
| Lorelei      | J. Cochran      |
| Lorna        | R. Green        |
| Maile        | D. W. MacDonald |
| Marellen     | W. Carlyle      |
| Marge        | H. H. Puslie    |
| Mariance     | W. Holloway     |
| Michele      | D. Dumesnil     |
| Minnaw       | S. B. Edwards   |

|              |  |
|--------------|--|
| Nora S.      | K. Mitchell and F. Scott                           |
| Phyllis C.   | P. Chant   |
| Rex          | W. Check   |
| Sea Lark     | W. Donald  |
| Sea Wolf     | S. Hunter  |
| Silver Wings | J. Harris  |
| Sophia W.    | M. Wall  |
| Starlight    | O. D. McLeod                                       |
| Tempest      | I. Shorter and R. Shorter                          |
| Ursa         | V. Beneditt  |
| Venture      | E. Jobs  |
| Victory      | E. Buse  |
| Voyageur     | A. Morrison and A. Williamson and H. Deane-Freeman |

## PRINCE RUPERT ROWING AND YACHTING CLUB

## Prince Rupert, B. C.

|                  |              |
|------------------|--------------|
| Dr. L. M. Greene | Commodore    |
| Dr. R. G. Large  | Secy.-Treas. |

Mailing Address: P. O. Box 314

## Prince Rupert, B. C.

| Boat           | Owner                |
|----------------|----------------------|
| Aledor         | Dr. L. W. Kergin     |
| A.P.C.         | A. P. Crawley        |
| Aurion         | O. Nobles            |
| Brian S.       | A. C. Stegavig       |
| Doremur        | G. Daniels           |
| Edac           | Dr. J. P. Cade       |
| Elizabeth M.   | Columbia Cellulose   |
| Evie           | A. W. McBroom        |
| Full Moon      | Dr. W. S. Kergin     |
| Harla          | C. Michaloff         |
| Little Toot    | C. J. Currie         |
| Marion C.      | Columbia Cellulose   |
| Marjorie       | J. S. Wilson         |
| Nancy          | Geo. Hill            |
| Northern Cross | Diocese of Caledonia |
| P.M.L. 4       | Game Department      |
| Ross A.        | G. Anderson          |
| Rudon          | Dr. L. M. Greene     |
| Shadrack       | Dr. A. W. Large      |
| Skylark        | R. McCarthy          |
| Topolobampo    | C. F. Hallan         |
| Yaloe          | Dr. R. G. Large      |

## ROYAL CANADIAN NAVY YACHT CLUB

## H.M.C.S. Naden Esquimalt, B. C.

Chaplain G. L. Gillard, M.B.E.

Commodore

|                     |           |           |
|---------------------|-----------|-----------|
| Chief Petty Officer | N. McLeod | Secretary |
|---------------------|-----------|-----------|

| Boat           | Owner                    |
|----------------|--------------------------|
| Babe           | Lt. Cdr. J. D. McCormick |
| Blue Goose     | Cdr. Jim Davis           |
| Domo           | Lt. H. Moist             |
| Nova           | Lt. Cdr. P. H. Sinclair  |
| Pal            | Petty Ofcr. J. K. Luke   |
| Promise        | Chaplain G. L. Gillard   |
| Red Rose       | Lt. Cdr. Chadwick        |
| Scarlet Runner | Chief G. H. Balcomb      |
| Sic 'Em        | (Ordnance)               |
| Simone         | Chief N. E. Bryon        |
| White Swan     | Commodore G. R. Miles    |
| Xtaway         | Commodore Lea Gillard    |
|                | S./Lt. R. Leckie         |

## ROYAL VANCOUVER YACHT CLUB

## 3811 Point Grey Road Vancouver, B. C.

|                     |           |
|---------------------|-----------|
| Capt. B. L. Johnson | Commodore |
| R. J. Bicknel       | Secretary |

## POWER BOATS

| Boat              | Owner                           |
|-------------------|---------------------------------|
| Abegweit          | C. Storch                       |
| Acrasia           | J. & A. Bennett                 |
| Aleta             | Morris Wilson                   |
| Aljo              | J. G. Chutter                   |
| Aloha             | J. M. Kerr                      |
| AquaJoy           | W. M. Bennett                   |
| Arab              | T. H. Coverinton                |
| Arieta            | T. W. Ayres                     |
| Bee Bee           | Allan M. McGavin                |
| Bee Gee II        | R. Nelson                       |
| Blue Horizon      | T. E. Hethrington               |
| Bonnie Pat        | T. H. Gadd                      |
| Carousel          | R. D. Welch                     |
| Celaeno           | F. G. Sweet                     |
| Chinthe           | Mrs. M. McDonald                |
| Citto             | R. H. R. Young                  |
| Cleodoxa          | B. Arundel                      |
| Clipper           | K. A. Cruise                    |
| Companero         | T. P. Barnett                   |
| Cora May          | Ernest F. Riddle                |
| Corsair           | W. K. Sulley                    |
| Coryels           | J. V. W. Phillips               |
| Cygnus II         | J. L. Hellivell                 |
| Danae             | Dr. H. Mitchell                 |
| Deidre II         | E. S. Glaspie and E. S. Glaspie |
| Dorissar          | L. C. deMerrall                 |
| Earlmar           | E. B. Finning                   |
| Effort I          | M. S. White                     |
| Eldee             | L. D. Dueck                     |
| Evelyn            | R. S. Carter                    |
| Far West          | Dr. M. Johnson                  |
| Fifer             | E. Lowe                         |
| Fifth Fusilier    | G. R. Nightingale               |
| Fiona II          | Dr. J. B. Hallows               |
| Freen Enterprise  | W. T. Money                     |
| Fusilier          | F. S. Clendening                |
| Geva              | G. E. Morrison                  |
| Geva II           | G. E. Morrison                  |
| Glennifer         | K. Mair                         |
| Happy Days        | L. R. Grant                     |
| Hi-Time           | E. Chisholm                     |
| Hope Point        | J. A. Moody                     |
| Hulakai           | Dr. J. E. Harrison              |
| Invader           | H. Reifel                       |
| Jacamac           | B. Atkins                       |
| Jervis II         | E. W. Sampson                   |
| Jo-Leen           | J. Jenkins                      |
| Kennett           | T. H. Wright                    |
| Lady Isa          | T. H. Fakenham                  |
| Lamachi           | R. Ginn                         |
| Leeward           | Dr. R. E. McKechnie             |
| Leola V.          | W. Vivian                       |
| L. & H.           | S. Darnbrough                   |
| Latona A.         | O. H. Bell                      |
| Little Jean       | C. H. Corkum                    |
| Maia              | A. G. Smith                     |
| Mamita            | H. Rendell                      |
| Margaree          | F. B. Smith                     |
| Marquitta         | W. J. Johnson                   |
| Mar O Mia         | J. J. Chaff                     |
| Meander           | S. Wilson                       |
| Melel             | M. A. Stewart                   |
| Min'sa            | J. A. Beller                    |
| Ministik          | R. M. Pyle                      |
| Mo'A              | R. Cave, Browne Cave            |
| Nelvibill         | R. S. Leith                     |
| Nip n' Tuck       | J. R. T. Grant                  |
| Nirvana II        | E. A. Towns                     |
| Nodlew            | J. B. Smith                     |
| Norda             | D. Mitchell                     |
| Patlio            | G. Murphy                       |
| Peanut            | R. M. Shaw                      |
| Pride of the West | L. A. Lewis                     |



Privateer J. Wilkinson  
 Pursuit II K. G. McCandless  
 Reverie L. O. Lind  
 Rhinegold C. C. Ferrie  
 Ripple Point W. G. Dolmage &  
 J. D. Maitland  
 Rockabye J. H. Maier  
 Romac R. M. McLuckie  
 Saga P. Jenner  
 Salt Mist J. B. Hoffar  
 Sea Otter J. G. Gould  
 Shal-O-Mar J. A. Longley  
 Shearwater Frank Read  
 Show Girl J. Howe  
 Sinbad I A. S. Hudson  
 Siskin R. Carfrae  
 Stranger F. E. Lewis  
 Streamer Dr. R. E. McKechnie  
 Sulhamer J. W. C. Duck  
 Tally-Ho G. E. D'Arcy  
 Tempest D. Cromie  
 Tempest II G. W. Sweeney  
 Tobar J. G. White  
 Trasnagh II Chas. S. Frew  
 Truant Dr. J. Scott Baxter  
 Tye B. Atkins  
 Ubique C. S. Thicke  
 Victory 4 E. D. Stone  
 Voyageur III Charles N. Pretty  
 Walthe C. Wallace  
 Wayward Boy  
 S. J. Hatchett, Jr.  
 Whi-Ski S. P. Cromie  
 White Cap W. C. Dufton  
 Wyrill R. H. R. Young  
 Yellow Jacket A. Way  
 Zephyr D. C. McClure

## SAIL BOATS

Alisa I J. M. Gibson  
 Alisa II R. B. Pinney  
 Amberjack S. G. Foley  
 Anywhere C. H. Elliott  
 Ariel L. Kyle  
 Ariki E. Perry  
 Atlanta W. L. Hunt  
 Balandra Collin Hanney  
 Barracouta J. W. Chappell  
 Blue Mist C. G. Crebbin  
 Carita II W. Roedde  
 C'Dase D. M. McDonald  
 Clear Sky Phil & Sid Miller  
 Consuelo J. G. Shockey  
 Cresset D. P. Urry  
 Day Gem J. K. Sloan  
 Duende Miss O. J. Biller  
 Ealaaid K. McKenzie  
 Elomar Dr. H. Ross  
 Elusive W. R. Morrow  
 Errant I K. C. Middleton  
 Escapee P. H. G. Brock  
 Fantasie J. Williamson  
 Free Lance E. R. Shearman  
 Ganessa A. W. Nyblom  
 Gin Fizz A. D. & C. A. Manson  
 Gometra J. G. Oertgen  
 Half Moon L. G. D. Fraser  
 Havoc R. Delaplace  
 Hawk J. C. McPherson  
 Here & There G. F. Askew  
 Hildaway D. C. Stirling  
 Hi-Ho G. A. Cran  
 Hop A Long Jack V. Long  
 Hymac Dr. R. P. McCaffrey  
 Inez D. Barracough  
 Ishbell S. A. Smith  
 Jimbo Jack B. K. Burnett  
 Lady Gay J. Hamilton  
 Lizbeth II R. K. Baker  
 Maratea Dr. A. R. Anthony  
 Mischief G. Chisholm  
 Miss Lee L. B. Culter  
 Murrelet Dr. W. J. Curry  
 Night Mare R. White & W. D.  
 Hargrave

Obo P. R. Burr  
 Pegasus J. C. Myers &  
 J. H. Wells  
 Polaris P. Leslie  
 Raven J. Dobson & Bob Little  
 Rebel Dr. R. Anderson  
 Restless D. C. B. Duff  
 Reverie Charles Bayne  
 Riata C. F. Butcher  
 Rowena K. B. Woodward  
 Sandra L. Daniels  
 Saucy Sue G. B. Reynolds  
 Shang-ri-la W. Walsh  
 Spectre K. Parsons  
 Spirit H. A. Jones  
 Spitfire George Parsons  
 Stefanie A. H. Leitch  
 Sure Hope J. H. Puntin  
 Swallow J. Vans McDonald  
 Tomara Thomas N. Anderson  
 Tom Boy Thomas W. Baird  
 Tornado L. Wilson  
 Totem Dr. Cecil Helmer  
 Trade Winds E. G. Tindle  
 Troop Ship John Rogers  
 Vampire Miss Diane Bancroft  
 Vandal John Green  
 Ventocum D. S. Hossie  
 Verona S. P. Judge  
 Vixen L. Oertgen  
 & R. Boulter  
 Vogad II B. R. Tupper  
 Wee Mac R. I. McClure  
 White Witch E. J. Treloar  
 Winston Capt. E. L. Johnson  
 Wren II Kenneth Caple  
 Yahda F. C. McGregor

Grant L. E. H. Livingston  
 Halycon II J. M. Green  
 Hardtak II R. Fraser  
 Hel-Dot E. D. Liersch  
 Hobo W. H. Molson  
 Hornet H. B. Murray  
 Idle Moment J. H. Gann  
 Inez D. Barracough  
 Ingly N. A. Beketov  
 Iona G. MacKinnon  
 Ivanhoe A. J. Jukes  
 Janith G. P. Fern  
 Jeep G. Edwards  
 Jo-Mar Dr. G. C. Kenning  
 Josephine B. W. Davies  
 Juno J. Andrews  
 Kakawia J. Prentice  
 Kathleen R. C. Ross  
 Kismet H. Gann  
 Kit-Gard E. N. Liersch  
 Kitawia W. K. McCarter  
 Lady Domar T. H. Peacock  
 Lady Helen J. R. MacMillan  
 Lalonga R. V. James  
 Little Empress R. W. Wylie  
 Loon A. D. Cressie  
 Louen K. Harvey  
 Lucania D. McKay  
 Lynjon B. Whitely  
 Mac III H. W. Gladwell  
 Mandalay B. H. B. Olson  
 Manukal R. P. Casle  
 Manyana R. S. Olson  
 Margaret D. A. Wright  
 Maudrine H. G. Reynolds  
 May D. E. P. Ashe  
 Medosa Capt. R. L. Jermain  
 Meko Dr. V. B. Taylor  
 Menita Capt. W. B. Holmes  
 Mintaka W. Barrett  
 Mirrabooka R. S. Dundas  
 Misty Glow D. J. Lawson  
 Mosca L. A. Genge  
 Moya F. W. Francis  
 Murrelet G. H. May  
 Nesika A. Locke & M. Stretton  
 Nirvana F. B. McLeod  
 Nomad A. M. Melan  
 Nomana W. G. McIntosh  
 Northern Light H. L. Sangster  
 One Seagull Dr. E. C. Hoodless  
 Onoway D. Ansley  
 P.D.Q. C. Wend  
 Pamannja A. Merston  
 Pancho N. J. Walker  
 Patricia R. N. Smith  
 Pelican G. Jeune  
 Phyllis F. Maj. J. E. Matthews  
 Pirate D. G. Roberts  
 Redskin A. W. Ball  
 Richmond II F. J. Holden  
 Ripples W. Thomson  
 Ris-K J. Moran  
 Rogue E. B. Christopher  
 Rosawill Dr. W. S. Simpson  
 Roscrana G. G. Share &  
 Dr. W. N. Westwood  
 Saga J. Featherstone  
 Saga Dr. W. N. Westwood  
 Salishan Dr. G. W. C. Bisset  
 Seafarer H. L. Carroll  
 Shangrila W. Walsh  
 Silver Cloud M. A. W. Bridgman  
 Silver Moon W. Hardwick  
 Snark A. W. Mackenzie  
 Spartan III P. F. Thornton  
 Spindrift Dr. R. Scott Moncrieff  
 Spirit H. A. Jones  
 Spooky J. C. Cooke  
 Sprite K. Johnson  
 Stardust D. Taylor  
 Stella Maris L. M. Johnstone  
 Stormy V. McConaghy  
 Sugar W. Richardson  
 Tabu D. G. Roberts  
 Tahuna L. P. Williams  
 Tarpon III R. A. Jefferson  
 Tatos R. L. Mayhew

ROYAL VICTORIA  
YACHT CLUB

Cadboro Bay  
 Victoria, B. C.

H. A. Wallace Commodore  
 Maj. P. Steel Sec'y-Manager

Boat Owner  
 Alcopia R. Lipsey  
 Argus T. H. Coverdale  
 Ariel E. Dowell  
 Aquilla P. Townshead  
 Avalon A. Wilson  
 Ayak R. Moore  
 Ballerina S. Houston  
 Bendora Dr. B. W. Nickells  
 Birdwill R. E. Coleman  
 Bonaventure N. P. Blandy  
 Buccaneer III H. A. Wallace  
 Buccaneer J. A. Dunn  
 Canim T. A. G. Beeching  
 Chack Chack Capt. A. C. Davy  
 Cherie Dr. R. J. Wride  
 Clipper Dr. W. Nicholl  
 Cutty Sark H. Peake  
 Cygnus J. Moran  
 Dabchick J. D. Bell  
 Dawn H. W. Miller  
 Dee Ann H. Flinn  
 Dixie E. Wilson  
 Doramar J. Burridge  
 Duchess II P. Ferguson  
 Duna Dr. W. H. Moore  
 Dunrobin N. Swainson  
 Ecume H. E. Bailey  
 Eileen G. H. W. Gladwell  
 Emoh Group Capt. A. R. Layard  
 Ethel M. II E. Todd  
 Falcon W. E. Speed  
 Falcon Marina C. L. Harrison  
 Fiona II Dr. B. Hallows  
 Four Winds H. H. Jeune  
 Galatea Dr. John A. Stewart  
 Girl Pat Brig B. Reford

|              |                  |
|--------------|------------------|
| Tejos        | W. S. Moore      |
| Thunder Bird | W. R. Harrison   |
| Tide Rip     | W. C. Caldwell   |
| Toni         | H. Beutelspacher |
| Tottle       | N. P. Blandy     |
| Tuch         | J. R. Genge      |
| Tuya         | J. Mara          |
| Twin Isles   | H. L. Sangster   |
| Tyche        | J. Gooderham     |
| Tyee Too     | J. S. Ogilvie    |
| Umpty        | W. F. Burton     |
| Vagrant      | L. L. Pelland    |
| Vanguard     | A. & J. Nelson   |
| Vela         | A. Evans         |
| Vixen        | H. Scholes       |
| Weald        | John A. Meade    |
| Wee Joe      | M. Lifton        |
| White Wings  | I. Williams      |
| Zalt         | K. S. Crabtree   |
| Zephyr I     | I. Kenning       |
| Zephyr II    | J. Woodward      |

### WEST VANCOUVER YACHT CLUB

Moorings: Fisherman's Cove  
West Vancouver, B. C.

Vern Kirby.....Commodore  
Mrs. F. Wallace.....Secretary

Sandy Cove

P. O., West Vancouver, B. C.

| Boat       | Owner                           |
|------------|---------------------------------|
| Aleta      | Dick Pullen                     |
| Aquilla    | C. Phillips-Wolley              |
| Ballerina  | Elizabeth Foster                |
| Bronco     | Dave Sinclair                   |
| Cara-Nome  | D. Chadwick                     |
| C'Daze     | Ralph Herrett                   |
| Crest      | B. Macdonald                    |
| Fury       | G. Farmer                       |
| Gwen       | V. R. Kirkby                    |
| Hi-Jack    | J. Stewart                      |
| Hopa Long  | J. Long                         |
| Judy-Lee   | C. H. E. Williams               |
| Kinknap    | Less Holloway & Jimmie Sinclair |
| Lady Doris | Harry Collins                   |
| Liane      | H. L. McCulloch                 |
| Lindaraxia | W. K. Warn                      |
| Loradel    | Fred Mallett & Bob McKlarmald   |
| Lulu-Belle | Ted Fulcher                     |
| Martinette | Hugo Ray                        |
| Monique    | D. Cove                         |
| Mira-Ma    | G. Ingham                       |

|           |                |
|-----------|----------------|
| Newinton  | John Coleman   |
| Nor       | Greg Collier   |
| Osprey    | June R. Smith  |
| Pal       | Basil Crawford |
| Pepper    | Allie Chisholm |
| Serena    | Vic Fox        |
| Shiftless | C. Waterton    |
| Sinbad    | Jim Chapman    |
| Sinbad    | P. Cherry      |

|            |                                   |
|------------|-----------------------------------|
| Snow Goose | Stan Huntingford                  |
| Tally-Ho   | G. E. D'Arcy                      |
| Tsolum     | H. J. Burnett                     |
| Wentocum   | Barbara & Dave Hosse & Buss Elsie |
| Westerley  | Dick Horspool                     |
| Westwind   | Paul Zuest                        |
| Wet-az-ell | Harold Spence                     |
| White Caps | Tom MacMillan                     |

## Alaska Yacht Clubs

### THE JUNEAU YACHT CLUB Juneau, Alaska

Robert W. Cowling.....Commodore  
Clara Van Wert.....Secretary

| Boat         | Owner                |
|--------------|----------------------|
| Bevolar      | Wm. Reck             |
| Bifocal      | Dr. D. D. Marquardt  |
| Blueboy      | W. L. Nance          |
| Cordilla D.  | Trevor Davis         |
| Donjac       | J. B. Burford        |
| Dough Boy    | Dr. J. O. Rude       |
| Hyak         | J. Simpson MacKinnon |
| Jazz         | Cash Cole            |
| Jo-Don       | Robert W. Cowling    |
| Messenger    | Ray Westfall         |
| Monterey     | Jack Westfall        |
| Nylic        | Keith Wildes         |
| Ourluck      | Minard Mill          |
| Silver Spray | J. Wayne Johnson     |
| Tinker       | Earl Hunter          |

### KETCHIKAN YACHT CLUB P. O. Box 1045 Ketchikan, Alaska

Henry Henn, Jr.....Commodore  
Perry E. Hilleary.....Secy.-Treas.

| Boat      | Owner         |
|-----------|---------------|
| Alzora    | Cy Perkins    |
| Athero    | Robert Baker  |
| Betty S.  | J. E. Diamond |
| Cavalcade | Bill Weed     |

|                 |  |
|-----------------|--|
| Chief           | Dick Lang                                |
| Clara D.        | B. R. Libe                               |
| Clipper         | Jim Church                               |
| Diajac          | Perry Yates                              |
| Doris L.        | Gordon Bordine                           |
| Dorothy W II    | Charlie White                            |
| Endeavor        | Amos Burg                                |
| Escape          | Henry Henn, Jr.                          |
| Estrella        | S. Oaksmith Jr.                          |
| Fandau          | Perry E. Hilleary and Wally Christiansen |
| Gallivanter     | M. J. Bucey & F. Larsen                  |
| Goose           | Jay Damrell                              |
| Go-Places       | Dr. W. E. Petersen                       |
| Irene           | Laurie Panama                            |
| Isis            | Dr. Dickinson                            |
| Jody            | Karl Warren                              |
| Karen           | Laurets Kildoi                           |
| Kittiwake       | R. P. Reichner                           |
| Mars            | Judd Konkle                              |
| Maude Carlton   | Dick Johnston                            |
| Narmata         | Jim Wadsworth                            |
| Nohuult         | E. Ryus                                  |
| Oaejo           | Shof Bailey                              |
| Pamarajah       | R. C. Cowger                             |
| Pee-wee         | V. A. Simpson                            |
| Pffft           | E. and R. Woodruff                       |
| Pinochle        | D. Barber                                |
| Plumbers Friend | Jack Nelson                              |
| Quarter         | Del Frie                                 |
| Rusty Penne     | V. Stedman & A. Simonsen                 |
| San Toy         | Perry Jenkins                            |
| Seaforth        | Charles Marler                           |
| S'Hahga         | Dr. R. W. Carr                           |
| Sinbad          | Frank Gingg                              |
| Snapper         | Claude Snyder                            |
| Sudan           | Harley Bray                              |
| Swiftsure       | Dick Bernhoft                            |
| Veteran         | Walter Blanton                           |
| Viking          | Martin Enockson                          |

## Southwest Yacht Clubs

### Southern California

#### AMERICAN POWER BOAT ASSOCIATION

Region 12  
522 Plaza Serena  
Ontario, Calif.

Reathel Bush.....Chairman  
Marvin (Slim) Boettger.....1st Vice-Chairman  
Bill Collins.....2nd Vice-Chairman  
Bill O'Brien.....Secretary

#### ALAMITOS BAY YACHT CLUB

3409 E. First St.  
Long Beach 3, Calif.  
John Munholland.....Commodore  
George Hart, Jr.....Secretary

#### BALBOA YACHT CLUB

P.O. Box 98  
Balboa Island, Calif.  
Harry L. Blodgett.....Commodore  
Carl H. Hanna.....Secretary

#### BLUE WATER CRUISING CLUB

4208 W. 64th St.  
Inglewood 3, California  
O. C. Saakes.....Commodore  
Paul Huffman.....Secretary

#### BLYTHE BOAT CLUB

P.O. Box 261  
Blythe, California  
John C. Maylock.....President  
H. A. Coulson, Jr.....Secy.-Treas.  
115 E. Hobson Way  
Blythe, Calif.

**CABRILLO BEACH YACHT CLUB**

Foot of Miner St.  
San Pedro, Calif.  
H. G. McKinney.....Commodore  
Frank H. Watson.....Secretary  
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Newport Beach, Calif.

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Honolulu 7, Hawaii

# Northwest Sailing Classes

## (One-Design)

### Blanchard Junior Knockabout

Keel sloop, day sailer. 20'x6'x3'. Sail area, 210 sq. ft. Designed and built by Blanchard Boat Co., Inc., Seattle.

### Blanchard Senior Knockabout

Cruising-racing sloop, 26'6"x21'x6'6"x3'6". Largest one-design cruising-racing class in the Pacific Northwest. Designer: N. J. Blanchard (Blanchard Boat Company, Inc., Seattle, Wash.). Blanchard Senior Knockabout Association: Mrs. Violet Banner, Secy., 5722 W. Winthrop, Seattle.

### Blanchard "33"

One design class auxiliary keel sloop. 33'x8'9"x5'. Sail area, 478 sq. ft. Designed by William Garden. Built by Blanchard Boat Co., Inc., Seattle.

### California 32 Class

Auxiliary keel sloop, 46'x32'x10'9"x6'9". Sail area, 857 sq. ft. Designed by Nicholas S. Potter.

### Columbia River One-Design (CROD)

28' auxiliary sloop. Designed by Joseph M. Dyer, Astoria, Ore. Fleet largely Portland-owned.

### Evergreen Class

Sloop, 36'x7'4"x5'. Sail area, 472 sq. ft. Evergreen Class Executive Committee, Robert T. Lamson, 6708 Fox Ave., Seattle, Wash. Class sponsored by the Corinthian Yacht Club, Seattle.

### Flattie Class

Centerboard sloop, 18' length by 5'3" beam. Designed by L. E. Geary. Insignia—a red flattie. International Flattie Yacht Racing Association, C. Frederick Harley, 11111 Aurora Ave., Seattle, Wash., secretary. Plans and registrations, \$10.

### International 14 Class

Centerboard sloop, 14 feet overall length, 56" beam. Measured sail area, 125 sq. ft. Dick Fenton, pres., International 14-Foot Sailing Assn., 417 South Hill St., Los Angeles 13, Calif. Designed by Uffa Fox.

### International 110 Class

Keel sloop, 24'x4'3"x2'9". Sail area, 110 sq. ft. Insignia—number "110." Designed by C. Raymond Hunt.

### Kettenburg—38

Auxiliary keel sloop, 38'x25'10"x8'x5'2". Sail area 536 sq. ft. Insignia—"K-38." Designed by George Kettenburg.

### Lightning Class

Centerboard sloop, 19'x15'10"x6'6". Sail area, 177 sq. ft. Lightning Class Association, Bank of South Haven Bldg., South Haven, Mich. Designed by Sparkman & Stephens. Carl J. Ackerman, western v-p., 4011 Sequoia St., San Diego 9, Calif.

### Mercury Class

Keel sloop, 18'x13'x5'4"x3'1". Sail area, 156 sq. ft. Designed by Ernest Nunes.

### Pacific Cruising Class (PCC)

Auxiliary keel sloop, 46'x9'6"x6'6". Sail area, 740 sq. ft. Designed by George Kettenburg.

### Penguin Class

Centerboard cat, 11'5"x4'8". Sail area, 72 sq. ft. Insignia—a black penguin. Designed by Philip L. Rhodes. Plans: George T. Ruby, treas., Penguin Class Dinghy Association, 1146 Heather Square, Pasadena, Calif. R. D. Israel, president, 3204 Ingelov St., San Diego 6, Calif.

### Rhodes 33

Keel sloop, 33'8"x22'4"x6'10"x5'. Sail area, 386 sq. ft. Designed by P. L. Rhodes.

### Snipe Class

Centerboard sloop, 15'5"x5'x3'. Sail area, 116 sq. ft. Designed by W. F. Crosby. Snipe Class International Racing Assn., 522 Stellar Ave., Pelham, N. Y.

### Star Class

Keel sloop, 22'8½"x15'6"x5'8"x3'4". Sail area, 281 sq. ft. Plans: International Star Class Yacht Racing Assn., 51 East 42nd St., New York, N.Y. Designed by Francis Sweisguth (office of William Gardner).

# TROUBLE-SHOOTING GUIDE

## FOR MARINE ENGINES

**T**HIS SECTION is intended to serve as a guide to the boat owner when minor engine troubles develop during a cruise. Major mechanical repairs or overhauls requiring the facilities of a repair shop are not covered, although we will try to tell you how to recognize some of them.

In any search for engine troubles they should be traced systematically and only one adjustment made at one time.

There is nothing magical about the operation of a marine engine. If no parts are broken, if it is correctly assembled and timed, if it has fuel and ignition and can be cranked, the engine must run.

Should the engine refuse to start, don't run the battery down by cranking the engine. Think the situation over and find out why it doesn't start. Remedy the situation if possible and then attempt to start the engine.

The following causes, effects, and remedies will, we hope, assist you to have more enjoyable cruising by making minor repairs afloat possible.

### IF CRANKING MOTOR WILL NOT OPERATE

#### Discharged or low battery:

Recommended test for battery is to check with a hydrometer or voltmeter. If these are not available, in emergency, a quick check for battery condition is to touch a pair of pliers quickly across the terminals. A good fat spark will indicate a live battery.

**CAUTION:** Before working around the battery or ignition circuits, the engine compartment should first be thoroughly aired out, and a check made for gasoline fumes, before breaking any connections which might result in an exposed spark.

#### Loose or corroded battery terminals:

Check cable connections at the terminal posts. Don't just look; break the connection, clean and reclamp.

#### Defective starter switch:

First inspect the connections. Try the emergency button under screw cover at end of relay switch on cranking motor. In an emergency, test push button by shorting across it with a pair of pliers,

first taking proper precautions against danger of fire.

#### Bendix pinion of cranking motor jammed:

Reach under flywheel and see if the starting pinion is free. If pinion is jammed against flywheel, it may be freed by loosening up the bolts which hold cranking motor to flywheel housing.

#### Defective cranking motor:

Inspect commutator and brushes.

#### Engine may be "frozen":

Crank engine by hand, to make sure it is free.

### CRANKING MOTOR REVOLVES BUT ENGINE DOES NOT

#### Weak battery:

Not sufficient power to turn engine at normal speed. When this condition exists the cranking motor will have a characteristic hum.

#### Acid-eaten cable:

Insufficient current getting through. Give particular attention to ground connection on battery.

#### Broken Bendix drive, or gum on Bendix spiral:

Remove the cranking motor and look for broken spring. If Bendix pinion does not move freely on spiral, wash pinion and spiral in mineral spirits and lubricate sparingly with light engine oil, S.A.E. 10.

#### Stripped gear on flywheel:

This is extremely rare.

As an emergency measure if only a few teeth are gone from flywheel gear rotate engine by hand until stripped portion is beyond Bendix gear. The starter can then turn the engine over almost one revolution before meeting stripped part and will in some cases coast over and re-engage good teeth.

### CRANKING MOTOR OPERATES BUT ENGINE WILL NOT START

#### Improper carburetion:

Out of fuel?

Is gasoline reaching fuel pump? See if sediment bowl on fuel pump is filled with gasoline. If not, and there is fuel in

the tank, shut-off cock may be closed or the line may be plugged. Try the hand primer. Disconnect line at fuel pump and blow through line. Look for dents in tubing, and air leaks in fuel pump gaskets or in fuel line connections. Make sure that vent to gasoline tank is open.

Is fuel reaching the carburetor? Remove sediment bowl from fuel pump and see if screen is clean. Then disconnect line from fuel pump to carburetor, and see if gasoline flows freely. Look for water in fuel. Water will show as large drops which do not mix with fuel. If found, drain sediment bowl and carburetor.

Is fuel reaching the cylinders? Remove spark plugs and see if they are moist. If there is no trace of gasoline in the cylinders, carburetor may be out of adjustment, float level too low, or the jets may be clogged with dirt and gum.

Is choke closing properly? On dual carburetor models, if linkage permits one choke to remain partly open, both chokes will be out of action, causing hard starting.

Engine flooded? If the spark plugs are wet, this indicates flooding, caused by using the choke too long. Open throttle wide, set choke in non-choking position, turn switch on and crank engine a few times.

Air leaks at intake manifold?

Poor grade, old, or stale fuel in combination with cold weather causes hard starting. In very cold weather, heating the oil and warming the spark plugs will help.

If engine was previously running with the present carburetor adjustment, do not change it unless there is evidence of the needle valve vibrating out of adjustment.

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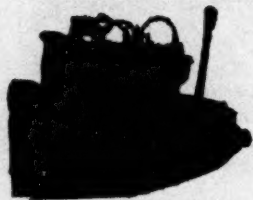
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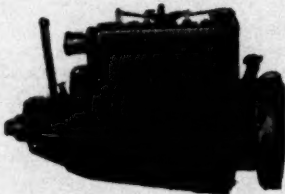
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Pacific Marine Supply Co., Seattle; Thomas A. Short Co., San Francisco; Shepherd Diesel Marine, Los Angeles, San Diego; McWayne Marine Supply Co., Honolulu; Edward Lipsett, Ltd., Prince Rupert, Vancouver, Victoria.



**ATOMIC FOUR**—You'll find it hard to believe its small size, big ability. 25 smooth, quiet h.p. in only 26 inches.



**SUPER-FOUR**—Here's 50 of the hardest working horsepower ever designed into a 100% marine motor this size. Look for tens of years of fine service when you have this rugged model.



**CRUISER SIX**—Long-time favorite in its size range. 90 flashing h.p.



### Electrical difficulties:

Possible trouble in the primary circuit may arise from corroded, dirty or loose connections; weak, leaky or grounded condenser; distributor points pitted or fused; distributor points set to wrong gap, or loose; breaker arm sticking because of weak or broken spring or because of tight hinge bushing.

When in doubt as to electrical troubles, a good, simple procedure is to replace the coil, condenser, and points and possibly the spark plugs and distributor rotor and cap. Then have the old ones tested at the next stop where facilities are available.

This, of course, requires an engine first aid kit, which should be carried on every boat, carefully packed in a dry box, which should consist of the following all new parts and as many of each as there are on the engine or engines:

Coil Spark plugs Condenser  
Point file or emery stone  
Points 3/32-inch round file  
Distributor rotor and cap

**CAUTION:** To avoid mixing plug wires, tape or mark all wires before removal. If they are mixed up, refer to the paragraph on wrong timing.

Trouble in the secondary circuit can be caused by corroded, dirty, or loose connections. Check high-tension wire from coil to distributor and all wires in distributor cap. Other causes: moisture or carbon on spark plug porcelains; cracked insulation, leaks and shorts; cracked distributor cap; carbon contact inside distributor cap broken or missing; rotor contact spring broken; ignition coil weak; wrong type of spark plug; improper gap on spark plugs; fouled or cracked spark plugs; distributor wired to wrong plugs.

A wet distributor cap and wires can be dried off by pouring a small amount of carbon tetrachloride over them and allowing it to evaporate.

### Poor compression:

A quick test for compression is to remove a spark plug and place your thumb over the hole, then crank the engine. A more accurate method is to use a compression gauge. Do not expect all cylinders to show the same compression pressure, but a decided difference will indicate improperly seating valves, worn rings, worn cylinder, or leaky gasket. After taking an initial reading, seal the piston with a teaspoon of engine oil poured through spark plug hole, and take a second reading. If pressure does not increase, this will indicate that improperly seating valves are at fault.

Poor compression may be caused by a loose or warped cylinder head; spark plugs loose in head; damaged cylinder head gasket; poorly seating valves; broken or weak valve springs; valves holding open due to insufficient tappet clearance; valves sticking open due to warped stems or carbon and gum on stems or in stem guides; badly worn, broken, or stuck piston rings; cylinder scored or worn excessively.

### Wrong timing:

Remove any spark plug, put your thumb over the spark plug hole and test for compression stroke, cranking the engine over by hand. Then, probing with a stiff wire, set piston on top dead center of the compression stroke. At this position, the breaker points in distributor should be just starting to open.

Firing order on most 6 cylinder engines is 1-5-3-6-2-4. Six cylinder engines known as "opposite rotation" usually have a firing order of 1-4-2-6-3-5. Opposite rotation engines are usually the port side engine in a twin screw boat. Most engines have the firing order stamped on a metal plate attached to the engine.

## OVERHEATING

Overheating is caused by worn water pump; obstruction in the oil cooler; obstruction in water intake scoop; scale or sand in water jackets; collapse of intake water hose under load; water by-pass valve off correct setting; low oil level in crankcase; defective thermostat.

## LACK OF POWER

Faulty compression.

Improper timing.

Poor carburetion.

Restriction in air supply to carburetor caused by dirt in flame arrester screen, or choke valve not completely opening.

Throttle control linked up so that throttle is not fully opening.

Dirt or water in sediment bowl of fuel pump.

Dirt or water in fuel lines or carburetor jets.

Air leak in fuel pump or fuel line.

Air leak in manifold gasket.

High engine temperature, caused by worn water pump or clogged water jackets.

Vent of gasoline tank not open.

Pre-ignition, caused by carbon deposits, by wrong plugs, or warped valve head.

Engine and propeller shaft misalignment.

Insufficient air getting into engine compartment.

## ROUGH, UNEVEN IDLING

Improper adjustment of idling screw or carburetor; float level too high or too low; idling jet air passage clogged.

Air leaks in intake manifold or carburetor; loose manifold nuts, damaged gasket at manifold; warped manifold.

Improper ignition.

Weak ignition coil.

Spark plug difficulties (gap too close).

Uneven compression.

Water leak in cylinder head, block, or manifold.

## MISSING AT HIGH SPEED

Spark plug troubles.

Broken insulation on high tension wires.

Weak breaker-point spring.

Fuel obstruction, indicated by back-firing.

Weak valve springs.

Improper tappet clearance.

## MISSING AT ALL SPEEDS

Blown head gasket between cylinders.

Sticking valves, broken valve spring.

Fouled spark plugs; broken insulation.

Leaky high-tension wiring.

Pitted or fused breaker points.

Incorrect breaker-point gap.

Improper valve tappet clearance.

Punctured condenser.

Gasket leak at intake manifold.

Carburetor out of adjustment.

## SPARK KNOCK AND FUEL KNOCK

Pre-ignition is caused by an incandescent particle of carbon or metal in the combustion chamber, which fires the mixture prematurely, while the piston is still rising. Detonation is caused by fuel of wrong octane rating, which burns too rapidly, throwing a sudden and abnormally high pressure against the piston. The two have a similar sound, a metallic ringing knock which is often described as a "ping." This is usually heard when the engine is laboring, accelerating rapidly, or overheated.

Causes of this condition are:

Carbon deposits in combustion chamber.

Ignition timed too early.

Weak springs in automatic distributor advance.

Incorrect spark plug (too hot).

Carbon on spark plugs or burned porcelain.

Sharp metallic edges in combustion chamber.

Hot valves resulting from insufficient tappet clearance, use of the wrong type of valve, improper seating, thin edged valves, warped or cracked valve heads.

Excessive engine temperatures, caused by faulty water circulation.

Low octane fuel, old or stale fuel.

Extremely lean carburetor mixture.

## BACK-LASH KNOCK

This can, under certain conditions, appear as a rattle or chucking noise in the reverse gear, and it may be easily confused with other types of engine knocks. It is caused by normal back lash between the teeth of the reversing gears, and it is heard only at low speeds, "washing out" when the engine is accelerated above 600 rpm. Normal back lash is not an indication of wear, and is harmless.

## VIBRATION ORIGINATING AT ENGINE

The commonest sources of vibration originating in or on the engine, as distinguished from causes originating outside the engine, are, misfiring; misalignment of engine and propeller shaft; bent or off-center coupling; engine loose on bed; engine support loose on cylinder block; unbalanced or sprung crankshaft; unequal compression of cylinders.

## VIBRATION FROM OUTSIDE THE ENGINE

Thumping and vibration originating outside the engine often telegraph along the propeller shaft and appear to originate in the engine. These may be caused by a bent propeller, sprung propeller shaft, worn stuffing box.

## UNCOMMON ENGINE NOISES

The following possible causes of engine noise are more rare but should be considered and checked in locating foreign sounds:

Flywheel loose on crankshaft.

Crankshaft pulley loose on flywheel.

Foreign object in exhaust passages.

Loose exhaust pipe at manifold connection.

Loose engine accessories, such as generator, water pump, etc.

Excessive timing gear back lash (sharp rap).



New 23-ft. Chris-Craft Holiday

## 1951 CHRIS-CRAFT

for every purse and purpose

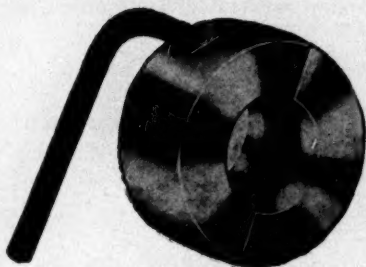
- ★ MOTOR BOATS—16 thru 62 ft.
- ★ MARINE ENGINES—60 thru 160 h.p.
- ★ OUTBOARD MOTORS—5½ and 10 h.p.
- ★ BOAT KITS—8 thru 21 ft.

World-famous quality, breath-taking beauty, proved dependability, outstanding performance ... you buy them all when you buy a Chris-Craft! See your friendly Chris-Craft Dealer today.

**Chris-Craft**  
CHRIS-CRAFT CORPORATION, ALGONAC, MICH.

WORLD'S LARGEST BUILDERS OF MOTOR BOATS

## Godfrey Propeller Corrosion Collar



**GUARANTEED  
PROPELLER PROTECTION  
AGAINST ELECTROLYSIS  
GRIPS on SHAFT**

Sizes for Shafts from ½" up to 6"

**PACIFIC COAST DISTRIBUTORS**

Sunde & d'Evers, Seattle, Wash.  
Paul W. Hiller, Wilmington, Calif.  
Angus Marine Sales, Victoria, B. C., Canada

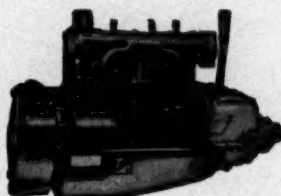
## DEPENDABLE POWER



## ECONOMICAL OPERATION

*First choice for . . .*

- CRUISERS
- WORK BOATS
- RUNABOUTS
- FISHING CRAFTS



# 6

**GASOLINE  
MODELS**

80 to 90 H.P.

**ARROWHEAD**—Compact, powerful 4-cylinder gasoline engine. 25-45 H.P., 3¼" x 4½", 186 cu. in., 1000-2000 R.P.M.

**PLUS . . .** KK, 8-10 H.P. (2 cyl.) 3¼" x 4¾".

METEOR, 18 H.P., 16 cu. in., 2½" x 3½".

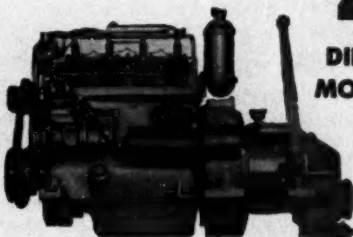
ARROWHEAD JUNIOR, 20-40 H.P., 133 cu. in., 3¼" x 4".

MODEL B, 32-40 H.P., 318 cu. in., 4½" x 6".

HIAWATHA SPECIAL, 58-90 H.P., 320 cu. in., 4" x 4¼".

# 4

**DIESEL  
MODELS**



**Model D4-30 (30 H.P.) . . .** The latest "Red Wing" development in Marine Diesel Engines.

**PLUS . . .** D60B, 65 H.P.

D6-160, 160 H.P.

D6-200, 200 H.P.

For complete specifications on RED WING Gasoline or Diesel Engines see your RED WING Distributor or write direct.

RED WING MOTOR CO., RED WING, MINNESOTA

## BACK-FIRING AT CARBURETOR

Engine back-firing through the carburetor when starting cold is many times unavoidable as it is the result of an imperfect air-gasoline mixture, which will automatically correct itself after the engine reaches normal operating temperatures. The reason why of back-firing in this case is late burning of the mixture in the cylinder, due to improper ratio of fuel to air, igniting the incoming charge and causing an explosion in the intake manifold and carburetor. Thus lean mixtures and retarded spark are the commonest cause of back-firing. Continued back-firing after the engine is warm should be corrected by checking the following possible causes:

- Excessively lean fuel mixture.
- Late ignition timing.
- Incorrect valve timing.
- Improperly seating valves, especially intake.
- Obstruction in fuel line.
- Dirt or water in sediment bowl.
- Intake manifold air leaks.
- Poor grade of fuel.
- Secondary wires crossed in distributor cap.
- Distributor governor sticking.
- Badly worn or improper spark plugs.

## ABNORMAL OIL CONSUMPTION

Leaks through poorly fitting gaskets or worn oil seals.

- Cracked pan—the above will be evident by oil in the bilge.
- Worn piston rings.
- Worn rod and main bearings.
- Worn valve guides.

## LOW OIL PRESSURE

Complete absence of oil pressure is a sure sign of a broken line, either inside or outside the engine. Normal oil pressure in a new engine is 30 to 40 pounds. A pressure of less than 20 pounds calls for investigation. (5 to 15 lbs. is satisfactory at idle). Above pressures may vary for different engines. SEE manufacturer's recommendations for your engine.

Possible causes of low oil pressure are:

Incorrect grade of oil. Correct viscosity should be as recommended by manufacturers.

Badly diluted engine oil.

Worn bearings.

Oil relief valve not properly seating. Look for dirt on seat of valve and adjust

tension according to manufacturer's recommendations.

Clogged oil cooler.

Air leak in oil pump suction line.

Sludge on oil pick-up screen.

Pick-up screen not submerged. due to insufficient oil, or engine installed at too steep angle.

Worn or damaged pump gears.

Inaccurate oil pressure gauge.

## HIGH OIL PRESSURE

Oil pressure should not exceed the maximum recommended by the engine manufacturer, normally around 40 lbs., except momentarily when the engine is started up cold. Abnormally high oil pressure is not desirable because it increases oil consumption. Possible causes of high oil pressure are:

Engine oil too heavy.

Relief valve not opening.

Obstruction in distributing line.

Inaccurate oil pressure gauge.

## FOULED SPARK PLUGS

Worn piston rings.

Worn cylinders.

Excess piston clearance.

Rich mixture.

Plugs too low in heat range.

Gaps too narrow, causes missing at idle.

## BURNED SPARK PLUGS

Plugs too high in heat range.

Lean mixture.

Late ignition timing.

Engine overheated. See Overheating.

Low octane fuel.

Badly leaking valves.

Cracked valve seat.

## MAINTAIN YOUR ENGINE

Keep your engine clean. Wipe off oil, grease and dirt. Sand rust spots and repaint with engine enamel.

Keep wiring clean, dry, and away from bilge and hot exhaust pipes.

Periodically check all fuel lines for leaks.

Vibration causes copper to become brittle and crack. Unsupported lines connected to engine should be annealed each year.

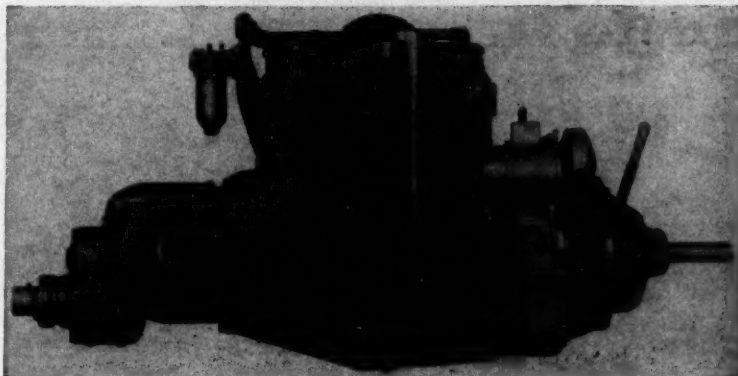
Obtain an operator's instruction manual from the manufacturer of your engine and carry on board at all times.

\* \* \*

**NOTE:** Much of the above information was obtained from the Gray Marine Motor Company Maintenance Handbook.



# KERMATH



## Power Take Off Engines That Will Work For You

### GASOLINE

| SEA<br>JEEP            | SEA<br>PRINCE          | SEA<br>ROVER            | SEA MATE<br>SPECIAL     |
|------------------------|------------------------|-------------------------|-------------------------|
| 134 cu. in.<br>61 H.P. | 230 cu. in.<br>95 H.P. | 320 cu. in.<br>120 H.P. | 404 cu. in.<br>150 H.P. |

### DIESEL

| 4-226                  | 6-298                  | 6-529                   | 6-935                   |
|------------------------|------------------------|-------------------------|-------------------------|
| 226 cu. in.<br>60 H.P. | 298 cu. in.<br>75 H.P. | 529 cu. in.<br>120 H.P. | 935 cu. in.<br>190 H.P. |

### REDUCTION GEAR RATIOS AVAILABLE

1½:1  
3:1

2:1  
3½:1

2½:1  
4:1

**BRYANT'S MARINA, Inc. T. B. COOK ENGINE CO.**

1117 East Northlake  
Seattle 5, Washington

Foot S.W. Gibbs  
Portland 1, Oregon

**JOHN G. RAPP CO.**

123 Second Street  
San Francisco 5, California

**KERMATH MANUFACTURING COMPANY**  
5895 COMMONWEALTH AVENUE      DETROIT 8, MICHIGAN

# GASOLINE MARINE ENGINES-1950

## Specifications

| Model Name<br>or Number | H.P. | Bore<br>Stroke | Cyl. | Piston<br>Displ.<br>Cu. Ins. | Max.<br>R.P.M. | Inches            |               |                          |                         | Weight |
|-------------------------|------|----------------|------|------------------------------|----------------|-------------------|---------------|--------------------------|-------------------------|--------|
|                         |      |                |      |                              |                | Length<br>Overall | Max.<br>Width | Height<br>Above<br>Shaft | Depth<br>Below<br>Shaft |        |
| ARNOLT                  |      |                |      |                              |                |                   |               |                          |                         |        |
| Arnolt DDT              | 20   | 2½x3¼          | 4    | 61                           | 2800           | 30                | 17            | 10                       | 6                       | 281    |
| Arnolt RDT-2            | 20   | 2½x3¼          | 4    | 61                           | 2800           | 34                | 17            | 10                       | 6                       | 302    |
| Arnolt RDT-3            | 20   | 2½x3¼          | 4    | 61                           | 2800           | 34                | 17            | 10                       | 6                       | 305    |
| Arnolt RDT-4            | 20   | 2½x3¼          | 4    | 61                           | 2800           | 34                | 17            | 10                       | 6                       | 305    |
| BARR                    |      |                |      |                              |                |                   |               |                          |                         |        |
| Ford 4-120              | 40   | 3¼x3¾          | .... | 120                          | 3200           | ....              | ....          | ....                     | ....                    | ....   |
| Ford Model A & B        | 40   | 3¼x4½          | .... | ....                         | 2200           | ....              | ....          | ....                     | ....                    | ....   |
| Ford V8-60              | 60   | 2½x2½          | .... | 136                          | 3500           | ....              | ....          | ....                     | ....                    | ....   |
| Ford 6-95               | 95   | 3¼x4½          | .... | 226                          | 3200           | ....              | ....          | ....                     | ....                    | ....   |
| Ford 6-115              | 115  | 3¼x4½          | .... | 254                          | 3200           | ....              | ....          | ....                     | ....                    | ....   |
| Ford V8-100             | 100  | 3¼x3¾          | .... | 239                          | 3200           | ....              | ....          | ....                     | ....                    | ....   |
| Ford V8-145             | 145  | 3¼x4½          | .... | 337                          | 3200           | ....              | ....          | ....                     | ....                    | ....   |
| Chevrolet 6             | 90   | 3½x3¾          | .... | 216                          | 3300           | ....              | ....          | ....                     | ....                    | ....   |
| Chevrolet 6 (Hi-Torque) | 105  | 3½x4           | .... | 235                          | 3300           | ....              | ....          | ....                     | ....                    | ....   |
| Chrysler Royal 6        | 115  | 3¾x4½          | .... | 250                          | 3600           | ....              | ....          | ....                     | ....                    | ....   |
| Dodge 6                 | 102  | 3¼x4½          | .... | 230                          | 3600           | ....              | ....          | ....                     | ....                    | ....   |
| Plymouth                | 95   | 3¼x4½          | .... | 217                          | 3600           | ....              | ....          | ....                     | ....                    | ....   |
| Buick 8-40              | 110  | 3¼x4½          | .... | 248                          | 3600           | ....              | ....          | ....                     | ....                    | ....   |
| Buick 8-90              | 144  | 3½x4½          | .... | 320                          | 3600           | ....              | ....          | ....                     | ....                    | ....   |
| Cadillac V8 OHV         | 160  | 3¾x3¾          | .... | 331                          | 3800           | ....              | ....          | ....                     | ....                    | ....   |
| Oldsmobile Rocket       | 135  | 3¾x3¾          | .... | 303                          | 3600           | ....              | ....          | ....                     | ....                    | ....   |
| Willys Jeep             | 60   | 3¼x4½          | .... | 134                          | 4000           | ....              | ....          | ....                     | ....                    | ....   |
| Willys Hurricane        | 65   | 3¼x4½          | .... | 134                          | 4000           | ....              | ....          | ....                     | ....                    | ....   |
| BRENNAN                 |      |                |      |                              |                |                   |               |                          |                         |        |
| Imp.                    | 25   | 2½x3½          | 4    | 50                           | 4000           | 26                | 12            | 11                       | 5                       | 160    |
| Imp. II                 | 25   | 2½x2½          | 4    | 44                           | 5000           | 30                | 15            | 12                       | 5                       | 170    |
| Kid                     | 25   | 2½x2½          | 4    | 44                           | 5000           | 30                | 15            | 12                       | 5                       | 175    |
| Fisherman               | 50   | 4½x5           | 4    | 318                          | 1500           | 53                | 18            | 18                       | 5                       | 1000   |
| EE-4                    | 75   | 4½x5           | 4    | 318                          | 2000           | 53                | 18            | 18                       | 5                       | 750    |
| Frontenac               | 95   | 3½x4½          | 6    | 230                          | 3200           | 52                | 16            | 15                       | 7                       | 770    |
| 60                      | 60   | 4x5½           | 6    | 415                          | 1600           | 67                | 20            | 25                       | 6                       | 1200   |
| 100                     | 100  | 4x5½           | 6    | 415                          | 2200           | 65                | 20            | 25                       | 9                       | 900    |
| 100R                    | 100  | 4½x5½          | 6    | 500                          | 1600           | 67                | 20            | 25                       | 9                       | 1500   |
| 125                     | 125  | 4½x5½          | 6    | 600                          | 1600           | 65                | 20            | 25                       | 9                       | 1000   |
| 150                     | 150  | 4½x6½          | 6    | 620                          | 2000           | 73                | 22            | 30                       | 7                       | 1500   |
| 175                     | 200  | 5x6½           | 6    | 765                          | 2000           | 73                | 22            | 23                       | 7                       | 1600   |
| CHRIS-CRAFT             |      |                |      |                              |                |                   |               |                          |                         |        |
| B                       | 60   | 3¼x4           | 4    | 132.7                        | 3200           | 32                | 24            | 15                       | 9                       | 456    |
| K&KO                    | 95   | 3½x4½          | 6    | 229.7                        | 3200           | 40                | 24            | 16                       | 10                      | 626    |
| KL&KLO                  | 105  | 3½x4½          | 6    | 236.6                        | 3200           | 40                | 24            | 16                       | 10                      | 626    |
| KLC                     | 120  | 3½x4½          | 6    | 236.6                        | 3800           | 40                | 24            | 16                       | 10                      | 626    |
| M&MO                    | 130  | 4x4½           | 6    | 320.4                        | 3000           | 46                | 26            | 17                       | 10                      | 850    |
| KBL                     | 131  | 3½x4½          | 6    | 236.6                        | 3800           | 40                | 24            | 16                       | 10                      | 626    |
| ML&MLO                  | 145  | 4x4½           | 6    | 339.2                        | 3000           | 46                | 26            | 17                       | 10                      | 850    |
| MBL                     | 158  | 4x4½           | 6    | 339.2                        | 3400           | 46                | 26            | 17                       | 10                      | 850    |
| W&WO                    | 160  | 4½x4½          | 6    | 404.3                        | 3000           | 53                | 27            | 19                       | 11                      | 1232   |
| CHRYSLER                |      |                |      |                              |                |                   |               |                          |                         |        |
| M46 Ace                 | 87   | 3¼x4¾          | 6    | 217.7                        | 2800           | 44                | 23            | 17                       | 8                       | 710    |
| M46 Ace Special         | 105  | 3¼x4¾          | 6    | 217.7                        | 3600           | 44                | 23            | 17                       | 8                       | 710    |
| M47 Crown               | 104  | 3½x4½          | 6    | 250.6                        | 2800           | 47                | 23            | 17                       | 9                       | 805    |
| M47 Crown Special       | 125  | 3½x4½          | 6    | 250.6                        | 3600           | 47                | 28            | 17                       | 9                       | 805    |
| M48 Royal               | 135  | 3½x4¾          | 8    | 323.5                        | 2800           | 63                | 26            | 20                       | 10                      | 1030   |
| M48 Royal Special       | 165  | 3½x4¾          | 8    | 323.5                        | 3600           | 55                | 29            | 20                       | 10                      | 1030   |
| M49 Majestic            | 160  | 4x5            | 6    | 376.9                        | 3000           | 59                | 27            | 20                       | 13                      | 1428   |
| CLINTON                 |      |                |      |                              |                |                   |               |                          |                         |        |
| 300                     | 1.1  | 2x1½           | 1    | 4.71                         | 3600           | 11                | 13½           | 8½                       | 4.178                   | 28     |
| VS300                   | 1.4  | 2x1½           | 1    | 4.72                         | 3600           | 12                | 13            | 12½                      | ....                    | 36     |
| B700                    | 2    | 2x1½           | 1    | 5.89                         | 3600           | 12                | 13½           | 10                       | 4.150                   | 34     |
| VS700                   | 2    | 2x1½           | 1    | 5.89                         | 3600           | 14½               | 11½           | 14½                      | ....                    | 35     |
| CI100                   | 3    | 2½x1½          | 1    | 8.3                          | 3600           | 12½               | 14½           | 12                       | 4.150                   | 42     |
| CROSLEY                 |      |                |      |                              |                |                   |               |                          |                         |        |
| CMA                     | 25   | 2½x2½          | 4    | 44                           | 4500           | 38½               | 7%            | 13%                      | 6½                      | 223    |
| DU BRIE                 |      |                |      |                              |                |                   |               |                          |                         |        |
| Du Brie                 | 5    | 3¾x4           | 1    | 5                            | 960            | 21                | 17            | 19                       | 5                       | 165    |

Note: Due to space limitations, specifications are not always shown to the exact fraction, especially in piston bore and stroke measurements.

*In the Gray Line You'll find*

# ONE RIGHT ENGINE

*to fit your boat*

Cruiser Engines  
for Cruisers



Racing Engines  
for Racing

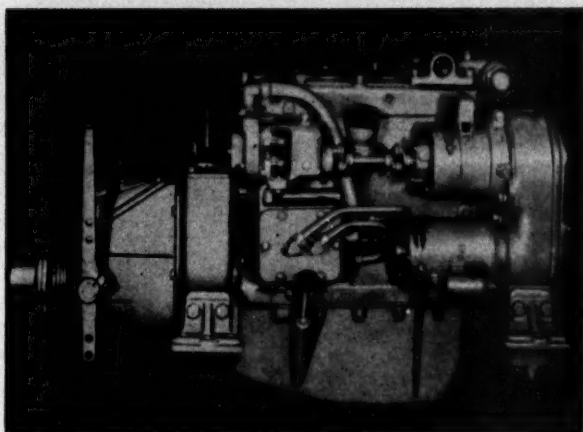


Workboat Engines  
for Workboats



Runabout Engines  
for Runabouts

Auxiliary Engines  
for Auxiliaries



## Distributors

CANADA: Vancouver, British Columbia—Hof-fart, Ltd.; Winnipeg, Manitoba—Mumford-Medland, Ltd.; St. John's, Newfoundland—Newfoundland Tractor and Equipment Co.; Erieau, Ontario—Ontario Marine Engine Sales; Liverpool, Nova Scotia—Steel and Engine Products, Ltd.; Montreal and Quebec—United Continental Engines, Ltd.

SEATTLE: Jules Engine & Equipment Company, Distributor for Washington, Oregon and Alaska.

SAN FRANCISCO: Hall-Young Company.

LOS ANGELES: Chas. E. Smith.

SAN DIEGO: Nuttall-Styris Company.

**GRAY MARINE MOTOR COMPANY - DETROIT 7, MICHIGAN**

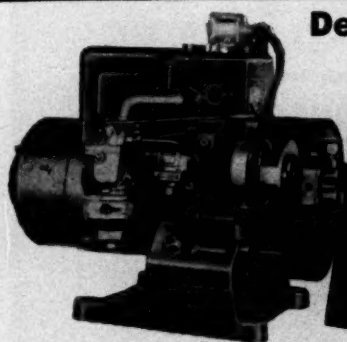
*Manufacturers of Gasoline and Diesel Engines — 10-200 h.p.*

# GRAYMARINE

| Model Name<br>or Number       | H.P. | Bore<br>Stroke                    | Cyl. | Piston<br>Displ.<br>Cu. Ins. | Max.<br>R.P.M. | Inches            |                  |                          |                         | Weight |
|-------------------------------|------|-----------------------------------|------|------------------------------|----------------|-------------------|------------------|--------------------------|-------------------------|--------|
|                               |      |                                   |      |                              |                | Length<br>Overall | Max.<br>Width    | Height<br>Above<br>Shaft | Depth<br>Below<br>Shaft |        |
| FEDERAL                       |      |                                   |      |                              |                |                   |                  |                          |                         |        |
| Model S .....                 | 90   | 3.30x4.40                         | 6    | 226                          | 3000           | 50                | 27               | 20                       | 9                       | 675    |
| Model F .....                 | 100  | 3.19x3.75                         | 8    | 239                          | 3500           | 42                | 25               | 23                       | 8                       | 680    |
| Model T .....                 | 115  | 3.50x4.40                         | 6    | 254                          | 3400           | 50                | 27               | 20                       | 9                       | 675    |
| Model L .....                 | 145  | 3.50x4.38                         | 8    | 337                          | 3600           | 50                | 27               | 23                       | 11                      | 1000   |
| FLAGSHIP                      |      |                                   |      |                              |                |                   |                  |                          |                         |        |
| Fisherman .....               | 90   | 3.3x4.4                           | 6    | 226                          | 2800           | 48                | 25               | 17%                      | 8%                      | 763    |
| 226 .....                     | 100  | 3.3x4.4                           | 6    | 226                          | 3400           | 48                | 25               | 17%                      | 8%                      | 743    |
| GERSHEL                       |      |                                   |      |                              |                |                   |                  |                          |                         |        |
| Bulldozer .....               | 40   | 3 $\frac{1}{4}$ x3 $\frac{3}{4}$  | 4    | 119.5                        | 3200           | 39                | 20               | 12                       | ....                    | 442    |
| The Jeep .....                | 60   | 3 $\frac{1}{4}$ x4 $\frac{1}{2}$  | 4    | 134.2                        | 4000           | 41                | 20               | 20                       | ....                    | 551    |
| Jet-99 .....                  | 90   | 3 $\frac{1}{2}$ x4 $\frac{1}{2}$  | 6    | 226                          | 3300           | 48                | 24               | 19                       | ....                    | 659    |
| The Mercury .....             | 100  | 3 $\frac{1}{16}$ x3 $\frac{3}{4}$ | 8    | 239                          | 3600           | 44                | 24               | 22                       | ....                    | 640    |
| 337 .....                     | 152  | 3 $\frac{1}{2}$ x4 $\frac{1}{2}$  | 8    | 337                          | 3600           | 50                | 27               | 23                       | ....                    | 962    |
| GLADDEN                       |      |                                   |      |                              |                |                   |                  |                          |                         |        |
| Model 40M .....               | 4.3  | 2 $\frac{1}{2}$ x3                | 1    | 14.7                         | 3200           | 14                | 18               | 15                       | 5                       | 78     |
| Model 75M .....               | 7.0  | 2 $\frac{1}{2}$ x3                | 1    | 19.5                         | 3200           | 14                | 18               | 15                       | 5                       | 78     |
| Model 75M Starter .....       | 6.5  | 2 $\frac{1}{2}$ x3                | 1    | 19.5                         | 3200           | 14                | 18               | 15                       | 5                       | 135    |
| GRAY                          |      |                                   |      |                              |                |                   |                  |                          |                         |        |
| Light Four 69 .....           | 16   | 2 $\frac{1}{2}$ x3 $\frac{1}{2}$  | 4    | 69                           | 1800           | 29                | 17               | 12                       | 7                       | 370    |
| Lugger Sea Scout-91 .....     | 25   | 2 $\frac{1}{2}$ x3 $\frac{1}{2}$  | 4    | 91                           | 2000           | 30                | 18               | 12                       | 7                       | 380    |
| Lugger 112 .....              | 31   | 3 $\frac{1}{2}$ ex3 $\frac{1}{2}$ | 4    | 112                          | 2000           | 31                | 18               | 12                       | 7                       | 400    |
| Lugger 162 .....              | 42   | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 4    | 162                          | 1800           | 33                | 19               | 15                       | 8                       | 565    |
| Express Four-140 .....        | 55   | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 4    | 140                          | 3000           | 32                | 19               | 15                       | 8                       | 545    |
| Phantom Four-45 .....         | 45   | 2 $\frac{1}{2}$ x3 $\frac{1}{2}$  | 4    | 91                           | 3800           | 29                | 18               | 12                       | 7                       | 390    |
| Fireball Four-50 .....        | 50   | 2 $\frac{1}{2}$ x3 $\frac{1}{2}$  | 4    | 91                           | 4000           | 29                | 19               | 16                       | 7                       | 395    |
| Phantom Four-62 .....         | 62   | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 4    | 140                          | 3600           | 33                | 21               | 15                       | 8                       | 525    |
| Express Four-162 .....        | 63   | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 4    | 162                          | 3000           | 33                | 19               | 15                       | 8                       | 565    |
| Racing-91 .....               | 65   | 2 $\frac{1}{2}$ x3 $\frac{1}{2}$  | 4    | 91                           | 5000           | 25                | 22               | 16                       | 7                       | 275    |
| Lugger Six-226 .....          | 73   | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 6    | 226                          | 2400           | 40                | 19               | 15                       | 8                       | 710    |
| Phantom Four-75 .....         | 75   | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 4    | 162                          | 3600           | 34                | 21               | 15                       | 8                       | 540    |
| Lugger Six-244 .....          | 83   | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 6    | 244                          | 2400           | 43                | 23               | 16                       | 8                       | 825    |
| Fireball Four-90 .....        | 90   | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 4    | 162                          | 4000           | 33                | 24               | 20                       | 8                       | 540    |
| Express Six-226 .....         | 93   | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 6    | 226                          | 3200           | 40                | 19               | 15                       | 8                       | 710    |
| Lugger Six-330 .....          | 96   | 4x4 $\frac{1}{2}$                 | 6    | 330                          | 2400           | 48                | 24               | 17                       | 9                       | 1070   |
| 100 .....                     | 100  | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 6    | 226                          | 3400           | 40                | 22               | 15                       | 8                       | 660    |
| Express Six-244 .....         | 102  | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 6    | 244                          | 3200           | 43                | 23               | 16                       | 8                       | 825    |
| Phantom Six-112 .....         | 112  | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 6    | 226                          | 3600           | 40                | 22               | 15                       | 8                       | 675    |
| 115 .....                     | 115  | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 6    | 244                          | 3600           | 42                | 25               | 16                       | 8                       | 785    |
| Express Six-330 .....         | 124  | 4x4 $\frac{1}{2}$                 | 6    | 330                          | 3200           | 48                | 24               | 17                       | 9                       | 1070   |
| Phantom Six-125 .....         | 125  | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 6    | 244                          | 3600           | 42                | 25               | 16                       | 8                       | 800    |
| Fireball Six-140 .....        | 140  | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 6    | 244                          | 4000           | 42                | 25               | 16                       | 8                       | 800    |
| Express Six-427 .....         | 150  | 4 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 6    | 427                          | 3200           | 51                | 25               | 18                       | 10                      | 1250   |
| Super Six-330 .....           | 155  | 4x4 $\frac{1}{2}$                 | 6    | 330                          | 3400           | 46                | 28               | 18                       | 9                       | 970    |
| Super Six-427 .....           | 175  | 4 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 6    | 427                          | 3200           | 51                | 29               | 18                       | 10                      | 1225   |
| Fireball Six-160 .....        | 160  | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 6    | 244                          | 4000           | 42                | 27               | 19                       | 8                       | 785    |
| Racing-244 .....              | 170  | 3 $\frac{1}{2}$ ex4 $\frac{1}{2}$ | 6    | 244                          | 5000           | 39                | 29               | 20                       | 8                       | 650    |
| HALL-SCOTT                    |      |                                   |      |                              |                |                   |                  |                          |                         |        |
| 183 & 184 Invader .....       | 200  | 5 $\frac{1}{2}$ x7                | 6    | 779                          | 1700           | 73                | 25               | 28                       | 12                      | 1900   |
| 168 & 169 Invader .....       | 250  | 5 $\frac{1}{2}$ x7                | 6    | 779                          | 2100           | 73                | 25               | 28                       | 12                      | 1900   |
| 186 & 187 Invader .....       | 250  | 5 $\frac{1}{2}$ x7                | 6    | 779                          | 2100           | 90                | 25               | 28                       | 19                      | 3265   |
| 2268 & 2269 Defender .....    | 630  | 5 $\frac{1}{2}$ x7                | V-12 | 2181                         | 2100           | 88                | 44               | 31                       | 12                      | 3600   |
| 2286 & 2287 Defender .....    | 630  | 5 $\frac{1}{2}$ x7                | V-12 | 2181                         | 2100           | 102               | 44               | 31                       | 19                      | 4600   |
| KERMATH                       |      |                                   |      |                              |                |                   |                  |                          |                         |        |
| Sea Pup .....                 | 5    | 2 $\frac{1}{2}$ x2 $\frac{1}{2}$  | 1    | 18                           | 3000           | 17 $\frac{1}{2}$  | 13 $\frac{1}{2}$ | 10 $\frac{1}{2}$         | 4 $\frac{1}{2}$         | 78     |
| Sea Cub .....                 | 25   | 2 $\frac{1}{2}$ x3                | 4    | 65                           | 3400           | 29 $\frac{1}{2}$  | 18 $\frac{1}{2}$ | 11 $\frac{1}{2}$         | 5 $\frac{1}{2}$         | 300    |
| Sea Jeep, medium duty .....   | 45   | 3 $\frac{1}{2}$ x4 $\frac{1}{2}$  | 4    | 134                          | 2400           | 36                | 21 $\frac{1}{2}$ | 17 $\frac{1}{2}$         | 7                       | 540    |
| Sea Jeep, high speed .....    | 61   | 3 $\frac{1}{2}$ x4 $\frac{1}{2}$  | 4    | 134                          | 3600           | 36                | 21 $\frac{1}{2}$ | 17 $\frac{1}{2}$         | 7                       | 540    |
| Sea Prince, medium duty ..... | 75   | 3 $\frac{1}{2}$ x4 $\frac{1}{2}$  | 6    | 230                          | 2600           | 42 $\frac{1}{2}$  | 24               | 16                       | 8                       | 700    |
| Sea Prince, high speed .....  | 100  | 3 $\frac{1}{2}$ x4 $\frac{1}{2}$  | 6    | 230                          | 3600           | 42 $\frac{1}{2}$  | 24               | 16                       | 8                       | 700    |
| Sea Rover, medium duty .....  | 98   | 4x4 $\frac{1}{2}$                 | 6    | 320                          | 2200           | 52 $\frac{1}{2}$  | 23 $\frac{1}{2}$ | 18                       | 10                      | 925    |
| Sea Rover, high speed .....   | 130  | 4x4 $\frac{1}{2}$                 | 6    | 320                          | 3000           | 52 $\frac{1}{2}$  | 23 $\frac{1}{2}$ | 18                       | 10                      | 925    |
| Sea Mate, medium duty .....   | 120  | 4 $\frac{1}{2}$ x4 $\frac{1}{2}$  | 6    | 404                          | 2200           | 56 $\frac{1}{2}$  | 26 $\frac{1}{2}$ | 20                       | 10 $\frac{1}{2}$        | 1250   |
| Sea Mate, high speed .....    | 160  | 4 $\frac{1}{2}$ x4 $\frac{1}{2}$  | 6    | 404                          | 3000           | 56 $\frac{1}{2}$  | 26 $\frac{1}{2}$ | 20                       | 10 $\frac{1}{2}$        | 1250   |
| Sea Farer, special .....      | 225  | 5x5 $\frac{1}{2}$                 | 6    | 678                          | 2400           | 69 $\frac{1}{2}$  | 29 $\frac{1}{2}$ | 23 $\frac{1}{2}$         | 11                      | 1600   |
| Sea Raider, six .....         | 280  | 5 $\frac{1}{2}$ x6                | 6    | 779                          | 2400           | 77                | 29 $\frac{1}{2}$ | 29 $\frac{1}{2}$         | 10 $\frac{1}{2}$        | 2200   |
| Sea Raider, special .....     | 580  | 5 $\frac{1}{2}$ x6                | 12   | 1560                         | 2400           | 76 $\frac{1}{2}$  | 42 $\frac{1}{2}$ | 34 $\frac{1}{2}$         | 10 $\frac{1}{2}$        | 2825   |
| LATHROP                       |      |                                   |      |                              |                |                   |                  |                          |                         |        |
| Standard .....                | 30   | 5 $\frac{1}{2}$ x6 $\frac{1}{2}$  | 3    | 463                          | 660            | 60                | 25               | 22                       | 10                      | 1450   |
| Standard .....                | 40   | 5 $\frac{1}{2}$ x6 $\frac{1}{2}$  | 4    | 618                          | 710            | 66                | 25               | 22                       | 10                      | 1750   |



| Model Name<br>or Number                               | H.P.  | Bore<br>Stroke | Cyl. | Piston<br>Displ.<br>Cu. Ins. | Max.<br>R.P.M. | Inches            |               |                          |                         | Weight |
|---|-------|----------------|------|------------------------------|----------------|-------------------|---------------|--------------------------|-------------------------|--------|
|   |       |                |      |                              |                | Length<br>Overall | Max.<br>Width | Height<br>Above<br>Shaft | Depth<br>Below<br>Shaft |        |
| LH-4 .....  | 38    | 3 1/4 x 4      | 4    | 133                          | 2200           | 34                | 21            | 14                       | 6                       | 440    |
| LH-Master .....                                       | 70    | 4 x 4 1/4      | 4    | 214                          | 2500           | 38                | 22            | 17                       | 8                       | 785    |
| LH-6 .....  | 64    | 3 3/4 x 4 1/4  | 6    | 282                          | 2200           | 47                | 22            | 17                       | 8                       | 2200   |
| LH-Atom .....   | 90    | 3 3/4 x 4 1/4  | 6    | 282                          | 3000           | 47                | 22            | 17                       | 8                       | 876    |
| LH-DeLuxe .....                                       | 120   | 4 x 4 1/4      | 6    | 320                          | 3000           | 47                | 22            | 17                       | 8                       | .....  |
| LH-Super .....  | 132   | 4 x 4 1/4      | 6    | 339                          | 3200           | 47                | 22            | 17                       | 8                       | .....  |
| 125-Mystic .....                                      | 120   | 4 1/2 x 5 1/2  | 6    | 585                          | 1800           | 65                | 27            | 28                       | 8                       | .....  |
| 175-Mystic .....                                      | 175   | 5 1/2 x 6 1/2  | 6    | 1013                         | 1535           | 78                | 29            | 29                       | 9                       | .....  |
| Engineers .....                                       | 60    | 5 1/2 x 7      | 4    | 665                          | 875            | 75                | 29            | 24                       | 10                      | 2100   |
| Engineers .....                                       | 75    | 6 x 7          | 4    | 792                          | 915            | 75                | 29            | 24                       | 10                      | 2290   |
| Engineers .....                                       | 115   | 6 x 7          | 6    | 1188                         | 1000           | 92                | 29            | 24                       | 10                      | .....  |
| <b>LAUSON</b>   |       |                |      |                              |                |                   |               |                          |                         |        |
| RSM-326 .....   | 2     | 2 x 1 1/4      | 1    | 5.9                          | 3600           | 12                | 12            | 10                       | 5                       | 35     |
| TLM-326 .....   | 3     | 2 1/4 x 2 1/4  | 1    | 8.94                         | 3600           | 11                | 14            | 11                       | 6                       | 53     |
| PAM-826 .....   | 5 1/2 | 2 1/2 x 2 3/4  | 1    | 17.85                        | 3000           | 16                | 16            | 13                       | 7                       | 87     |
| <b>MICHIGAN</b>                                       |       |                |      |                              |                |                   |               |                          |                         |        |
| Junior 4 .....  | 25    | 2 1/2 x 3      | 4    | 65                           | 4000           | 28                | 20            | 12                       | 5                       | 325    |
| SR-2 .....  | 15    | 3 1/4 x 4      | 2    | 66.3                         | 1900           | 28                | 20            | 15                       | 6                       | 300    |
| SR-4 .....  | 60    | 3 1/4 x 4      | 4    | 132.7                        | 3400           | 33                | 20            | 15                       | 6                       | 435    |
| SR-6 .....  | 95    | 3 1/2 x 4 1/4  | 6    | 229.7                        | 3200           | 40                | 20            | 15                       | 6                       | 875    |
| <b>NORDBERG</b>                                       |       |                |      |                              |                |                   |               |                          |                         |        |
| Bluefin .....   | 80    | 3 1/2 x 4 1/4  | 6    | 230                          | 2500           | 45 1/2            | 22 1/2        | 14 1/2                   | 8 1/2                   | 710    |
| Arrow .....   | 95    | 3 1/2 x 4 1/4  | 6    | 230                          | 3200           | 45 1/2            | 22 1/2        | 14 1/2                   | 8 1/2                   | 750    |
| Marlin .....  | 110   | 4 x 4 1/4      | 6    | 320                          | 2500           | 49 1/2            | 22 1/2        | 16                       | 9                       | 880    |
| Knight .....  | 145   | 4 x 4 1/2      | 6    | 340                          | 3200           | 49 1/2            | 22 1/2        | 16                       | 9                       | 890    |
| <b>OSCO</b>   |       |                |      |                              |                |                   |               |                          |                         |        |
| 425D* Sea Atom .....                                  | 25    | 2 6/2 x 3      | 4    | 65                           | 3400           | 39                | 19            | 13                       | 6.5                     | 285    |
| 440D* Tracker .....                                   | 40    | 3 1/8 x 3.75   | 4    | 120                          | 3400           | 40                | 20            | 15                       | 8.37                    | 344    |
| 460D* Jeep .....                                      | 60    | 3 1/4 x 3 3/4  | 4    | 134                          | 3600           | 41                | 23            | 21                       | 7                       | 544    |
| 695D** Six .....                                      | 95    | 3 3/4 x 4.4    | 6    | 226                          | 3200           | 58                | 28            | 20                       | 8.5                     | 690    |
| 100D** V8 .....                                       | 100   | 3.18 x 3.75    | 8    | 239                          | 3600           | 49                | 24            | 23                       | 8                       | 616    |
| 6115D** Six .....                                     | 115   | 3.5 x 4.4      | 6    | 254                          | 3200           | 58                | 28            | 20                       | 8.5                     | 635    |
| 150D** Magnum V-8 .....                               |       | 3 1/4 x 3 3/4  | 8    | 239                          | 3600           | 49                | 27            | 23                       | 8                       | 682    |
| 175D** Magnum V-8 .....                               |       | 3 1/4 x 3 3/4  | 8    | 239                          | 5200           | 49                | 27            | 23                       | 8                       | 684    |
| * Available with 2:1 reduction gears.                 |       |                |      |                              |                |                   |               |                          |                         |        |
| ** Available with 1.5:1, 2:1 and 3:1 reduction gears. |       |                |      |                              |                |                   |               |                          |                         |        |
| <b>PACKARD</b>  |       |                |      |                              |                |                   |               |                          |                         |        |
| 1M-245 .....  | 100   | 3 1/2 x 4 1/4  | 6    | 245                          | 3200           | 51                | 25            | 17                       | 9                       | 960    |
| 1M-356 .....  | 150   | 3 1/2 x 4 5/8  | 8    | 356                          | 3200           | 59                | 27            | 18                       | 10                      | 1215   |
| <b>PALMER</b>   |       |                |      |                              |                |                   |               |                          |                         |        |
| BH .....  | 6     | 3 x 3 1/2      | 1    | 26                           | 2500           | 15                | 15            | 15                       | 4 1/4                   | 180    |
| BH .....  | 10    | 3 x 4          | 2    | 59                           | 1600           | 33                | 19            | 17                       | 5                       | 300    |
| ZR-1 .....  | 7     | 5 1/2 x 6      | 1    | 143                          | 700            | 42                | 26            | 24                       | 7                       | 630    |
| ZR-2 .....  | 18    | 5 1/2 x 6      | 2    | 286                          | 800            | 50                | 26            | 24                       | 7                       | 775    |
| ZR-3 .....  | 30    | 5 1/2 x 6      | 3    | 429                          | 800            | 62                | 26            | 24                       | 7                       | 1080   |
| ZR-4 .....  | 40    | 5 1/2 x 6      | 4    | 572                          | 800            | 72                | 26            | 24                       | 7                       | 1290   |
| RH-45 .....   | 48    | 3 1/4 x 4      | 4    | 132.7                        | 3000           | 46                | 19            | 13                       | 7                       | 430    |
| PH-75 .....   | 80    | 3 1/2 x 4 1/4  | 6    | 230                          | 3000           | 58                | 19            | 15                       | 10                      | 780    |
| PH-120 .....  | 125   | 4 x 4 1/4      | 6    | 320                          | 3000           | 62                | 19            | 18                       | 10                      | 920    |



## Dependable Light & Power Afloat

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*Marine*  
**ELECTRIC  
PLANTS**

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# SCRIPPS MARINE MOTORS

## SPECIFICATIONS

| Series                 | Horsepower | R.P.M. | Cu. In.<br>Displ. | Price     |
|------------------------|------------|--------|-------------------|-----------|
| <b>STANDARD MODELS</b> |            |        |                   |           |
| 30                     | 50         | 3200   | 134               | \$ 670.00 |
| F-4                    | 81         | 3000   | 220               | 1,021.00  |
| Seiner Special         | 81         | 3000   | 220               |           |
| 90*                    | 95         | 3000   | 230               | 929.00    |
| Mercury                | 100        | 3600   | 239               | 826.00    |
| 100*                   | 110        | 3000   | 320               | 1,237.00  |
| 6-339*                 | 140        | 3200   | 339               | 1,442.00  |
| 150                    | 185        | 3000   | 447               | 2,673.00  |
| 160                    | 175        | 2400   | 548               | 3,186.00  |
| 170                    | 200        | 2400   | 611               | 3,278.00  |
| 200                    | 225        | 2400   | 678               | 3,370.00  |
| 300                    | 350        | 2600   | 894               | 4,882.00  |

## SPECIAL HIGH SPEED

|        |     |      |     |           |
|--------|-----|------|-----|-----------|
| 4-60   | 60  | 3400 | 134 | \$ 670.00 |
| 6-95*  | 95  | 3000 | 230 | 929.00    |
| 6-110* | 110 | 3600 | 236 | 1,010.00  |
| 6-130* | 130 | 3200 | 320 | 1,252.00  |
| 6-145* | 145 | 3200 | 339 | 1,457.00  |
| 6-158* | 158 | 3400 | 339 | 1,500.00  |

## DIESELS

|                   |     |      |     |             |
|-------------------|-----|------|-----|-------------|
| 4-166 Coast Guard |     |      |     |             |
| Life-Saver        | 50  | 3000 | 166 | \$ 2,722.00 |
| 7000*             | 79  | 2600 | 255 | 2,754.00    |
| 8500*             | 84  | 2600 | 298 | 3,051.00    |
| 6-935             | 220 | 2000 | 935 | 10,660.00   |

Hydraulic reverse gears optional—extra.  
Optional reduction gear ratios available for all models.

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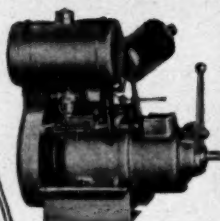
| Model Name<br>or Number | H.P.  | Bore<br>Stroke                   | Cyl. | Piston<br>Displ.<br>Cu. Ins. | Max.<br>R.P.M. | Inches            |                  |                          |                         |      | Weight |
|-------------------------|-------|----------------------------------|------|------------------------------|----------------|-------------------|------------------|--------------------------|-------------------------|------|--------|
|                         |       |                                  |      |                              |                | Length<br>Overall | Max.<br>Width    | Height<br>Above<br>Shaft | Depth<br>Below<br>Shaft |      |        |
| RED WING                |       |                                  |      |                              |                |                   |                  |                          |                         |      |        |
| KK                      | 10    | 3 $\frac{3}{4}$ x4 $\frac{1}{2}$ | 2    | 105                          | 1000           | 35                | 16               | 16                       | 6                       | 400  |        |
| Meteor                  | 18    | 2 $\frac{1}{2}$ x3 $\frac{1}{2}$ | 4    | 61                           | 2800           | 28                | 12               | 12                       | 6                       | 265  |        |
| Arrowhead Jr.           | 40    | 3 $\frac{1}{4}$ x4               | 4    | 133                          | 3000           | 35                | 16               | 16                       | 8                       | 500  |        |
| B                       | 40    | 4 $\frac{1}{2}$ x5               | 4    | 318                          | 1400           | 54                | 16               | 20                       | 7                       | 845  |        |
| Arrowhead               | 45    | 3 $\frac{3}{4}$ x4 $\frac{1}{2}$ | 4    | 186                          | 2400           | 41                | 16               | 9                        | 8                       | 600  |        |
| Hiawatha Special        | 90    | 4x4 $\frac{1}{2}$                | 6    | 320                          | 3000           | 54                | 17               | 18                       | 9                       | 950  |        |
| 140-GK                  | 140   | 4 $\frac{1}{2}$ x5 $\frac{1}{2}$ | 6    | 525                          | 2000           | 72                | 24               | 30                       | 12                      | 1900 |        |
| REGAL                   |       |                                  |      |                              |                |                   |                  |                          |                         |      |        |
| XB                      | 10-15 | 3 $\frac{1}{4}$ x4               | 2    | 66.3                         | 1900           | 32                | 20               | 12                       | 8                       | 375  |        |
| XC                      | 46    | 3 $\frac{1}{4}$ x4               | 4    | 133                          | 2800           | 36                | 20               | 14                       | 6                       | 465  |        |
| DF                      | 84    | 3 $\frac{3}{4}$ x4 $\frac{1}{2}$ | 6    | 298                          | 2800           | 54                | 23               | 14                       | 8                       | 1480 |        |
| SCRIPPS                 |       |                                  |      |                              |                |                   |                  |                          |                         |      |        |
| 30                      | 50    | 3 $\frac{1}{4}$ x4               | 4    | 134                          | 3200           | 33                | 22               | 14                       | 8                       | 357  |        |
| 4-60                    | 60    | 3 $\frac{1}{4}$ x4               | 4    | 134                          | 3400           | 33                | 22               | 14                       | 8                       | 357  |        |
| F-4                     | 80    | 3 $\frac{3}{4}$ x5               | 4    | 220                          | 3000           | 47 $\frac{1}{2}$  | 17               | 20 $\frac{1}{16}$        | 8 $\frac{1}{2}$         | 580  |        |
| 90                      | 95    | 3 $\frac{3}{4}$ x4 $\frac{1}{2}$ | 6    | 238                          | 3000           | 41                | 22               | 16                       | 8                       | 534  |        |
| 6-95                    | 95    | 3 $\frac{3}{4}$ x4 $\frac{1}{2}$ | 6    | 238                          | 3000           | 41                | 22               | 16                       | 8                       | 534  |        |
| Mercury                 | 100   | 3 $\frac{3}{4}$ x3 $\frac{1}{2}$ | V8   | 239                          | 3600           | 43                | 22               | 23                       | 9                       | 794  |        |
| 100                     | 110   | 4x4 $\frac{1}{2}$                | 6    | 328                          | 3000           | 47                | 22               | 18                       | 10                      | 849  |        |
| 6-339                   | 140   | 4x4 $\frac{1}{2}$                | 6    | 339                          | 3200           | 47                | 22               | 18                       | 10                      | 830  |        |
| 6-110                   | 110   | 3 $\frac{3}{4}$ x4 $\frac{1}{2}$ | 6    | 236                          | 3600           | 41                | 22               | 16                       | 8                       | 534  |        |
| 6-131                   | 131   | 3 $\frac{3}{4}$ x4 $\frac{1}{2}$ | 6    | 236                          | 3800           | 41                | 22               | 16                       | 8                       | 534  |        |
| 6-130                   | 130   | 4x4 $\frac{1}{2}$                | 6    | 320                          | 3200           | 47                | 22               | 18                       | 10                      | 849  |        |
| 6-145                   | 145   | 4x4 $\frac{1}{2}$                | 6    | 339                          | 3200           | 47                | 22               | 18                       | 10                      | 830  |        |
| 6-158                   | 158   | 4x4 $\frac{1}{2}$                | 6    | 339                          | 3400           | 47                | 22               | 18                       | 10                      | 856  |        |
| 6-158                   | 158   | 4x4 $\frac{1}{2}$                | 6    | 339                          | 3400           | 47                | 22               | 18                       | 10                      | 850  |        |
| 150                     | 185   | 4 $\frac{1}{2}$ x5 $\frac{1}{2}$ | 6    | 447                          | 3000           | 57                | 24               | 23                       | 9                       | 1037 |        |
| 160                     | 175   | 4 $\frac{1}{2}$ x5 $\frac{1}{2}$ | 6    | 548                          | 2400           | 66                | 15 $\frac{1}{2}$ | 21 $\frac{1}{2}$         | 10                      | 1235 |        |
| 170                     | 200   | 4 $\frac{1}{2}$ x5 $\frac{1}{2}$ | 6    | 611                          | 2400           | 66                | 15 $\frac{1}{2}$ | 21 $\frac{1}{2}$         | 10                      | 1425 |        |
| 200                     | 225   | 5x5 $\frac{1}{2}$                | 6    | 678                          | 2400           | 66                | 15 $\frac{1}{2}$ | 21 $\frac{1}{2}$         | 10                      | 1525 |        |
| 300                     | 350   | 4 $\frac{1}{2}$ x5 $\frac{1}{2}$ | VM   | 894                          | 2580           | 59                | 25               | 22 $\frac{1}{2}$         | 10                      | 1650 |        |
| STAR                    |       |                                  |      |                              |                |                   |                  |                          |                         |      |        |
| Emperor 4-15            | 25    | 2 $\frac{1}{2}$ x3               | 4    | 65                           | 3880           | 32                | 21               | 13                       | 8                       | 260  |        |
| Emperor 4-40            | 40    | 3 $\frac{1}{4}$ x4               | 4    | 133                          | 2400           | 38                | 21               | 14                       | 9                       | 440  |        |
| Emperor 4-50            | 55    | 3 $\frac{1}{4}$ x4               | 4    | 133                          | 3200           | 38                | 21               | 14                       | 9                       | 440  |        |
| Emperor 6-70            | 70    | 3 $\frac{3}{4}$ x4 $\frac{1}{2}$ | 6    | 221                          | 2600           | 44                | 26               | 15                       | 10                      | 675  |        |
| Emperor 6-90            | 90    | 3 $\frac{3}{4}$ x4 $\frac{1}{2}$ | 6    | 221                          | 3500           | 44                | 26               | 15                       | 10                      | 675  |        |
| Emperor V8-100          | 100   | 3 $\frac{3}{4}$ x3 $\frac{1}{2}$ | 8    | 239                          | 3600           | 46                | 24               | 24                       | 8                       | 645  |        |
| Emperor 6-95            | 95    | 4x4 $\frac{1}{2}$                | 6    | 320                          | 2600           | 50                | 26               | 17                       | 10                      | 855  |        |
| Emperor 6-125           | 125   | 4x4 $\frac{1}{2}$                | 6    | 320                          | 3200           | 50                | 26               | 17                       | 10                      | 855  |        |
| Emperor V8-160          | 160   | 3 $\frac{1}{2}$ x2 $\frac{3}{4}$ | 8    | 331                          | 3680           | 45                | 35               | 24                       | 9                       | 750  |        |
| UNIVERSAL               |       |                                  |      |                              |                |                   |                  |                          |                         |      |        |
| WM                      | 8     | 4 $\frac{1}{2}$ x4 $\frac{1}{2}$ | 1    | 67.6                         | 1260           | 19                | 13 $\frac{1}{2}$ | 18                       | 6                       | 220  |        |
| WMG                     | 8     | 4 $\frac{1}{2}$ x4 $\frac{1}{2}$ | 1    | 67.6                         | 1260           | 28                | 16               | 18                       | 6                       | 265  |        |
| Twin AFT                | 12    | 3x3 $\frac{1}{2}$                | 2    | 49.5                         | 2200           | 27                | 20               | 16                       | 7                       | 344  |        |
| Twin AFTL               | 12    | 3x3 $\frac{1}{2}$                | 2    | 49.5                         | 2200           | 28                | 20               | 16                       | 7                       | 365  |        |
| UJ                      | 25    | 2 $\frac{1}{2}$ x3 $\frac{1}{2}$ | 4    | 64.46                        | 3500           | 27                | 17               | 13                       | 6                       | 314  |        |
| UJM                     | 25    | 2 $\frac{1}{2}$ x3 $\frac{1}{2}$ | 4    | 64.46                        | 3500           | 27                | 17               | 13                       | 6                       | 258  |        |
| UJR                     | 25    | 2 $\frac{1}{2}$ x3 $\frac{1}{2}$ | 4    | 64.46                        | 3500           | 32                | 17               | 13                       | 6                       | 342  |        |
| UJMR                    | 25    | 2 $\frac{1}{2}$ x3 $\frac{1}{2}$ | 4    | 64.46                        | 3500           | 32                | 17               | 13                       | 6                       | 314  |        |
| BN*                     | 25    | 2 $\frac{1}{2}$ x4               | 4    | 95                           | 2500           | 35                | 17               | 15                       | 7                       | 415  |        |
| BNM*                    | 25    | 2 $\frac{1}{2}$ x4               | 4    | 95                           | 2500           | 34                | 17               | 15                       | 7                       | 372  |        |
| BNR*                    | 25    | 2 $\frac{1}{2}$ x4               | 4    | 95                           | 2500           | 42                | 17               | 15                       | 8                       | 515  |        |
| BNMR*                   | 25    | 2 $\frac{1}{2}$ x4               | 4    | 95                           | 2500           | 41                | 17               | 15                       | 8                       | 462  |        |
| BFA                     | 45    | 3x3 $\frac{1}{2}$                | 4    | 99                           | 3800           | 35                | 21               | 16                       | 7                       | 439  |        |
| BFAM                    | 45    | 3x3 $\frac{1}{2}$                | 4    | 99                           | 3800           | 35                | 21               | 16                       | 7                       | 397  |        |
| BFAR                    | 45    | 3x3 $\frac{1}{2}$                | 4    | 99                           | 3800           | 43                | 21               | 16                       | 8                       | 519  |        |
| BFAMR                   | 45    | 3x3 $\frac{1}{2}$                | 4    | 99                           | 3800           | 43                | 21               | 16                       | 8                       | 467  |        |
| LSG                     | 50    | 3 $\frac{1}{4}$ x4 $\frac{1}{2}$ | 4    | 149.3                        | 3000           | 40                | 19               | 17                       | 8                       | 572  |        |
| LSGM                    | 50    | 3 $\frac{1}{4}$ x4 $\frac{1}{2}$ | 4    | 149.3                        | 3000           | 40                | 19               | 17                       | 8                       | 545  |        |
| LSGR                    | 50    | 3 $\frac{1}{4}$ x4 $\frac{1}{2}$ | 4    | 149.3                        | 3000           | 47                | 19               | 17                       | 8                       | 656  |        |
| LSGMR                   | 50    | 3 $\frac{1}{4}$ x4 $\frac{1}{2}$ | 4    | 149.3                        | 3000           | 47                | 19               | 17                       | 8                       | 618  |        |
| Racer BR                | 75    | 3 $\frac{1}{2}$ x3 $\frac{1}{2}$ | 4    | 129.93                       | 4500           | 38                | 20               | 21                       | 6                       | 372  |        |
| AMS                     | 60    | 3x3 $\frac{1}{2}$                | 6    | 149.5                        | 3500           | 44                | 21               | 16                       | 8                       | 577  |        |
| AMSR                    | 60    | 3x3 $\frac{1}{2}$                | 6    | 148.5                        | 3500           | 51                | 21               | 16                       | 8                       | 645  |        |
| HCS                     | 90    | 3 $\frac{1}{2}$ x4 $\frac{1}{2}$ | 6    | 260                          | 3000           | 50                | 20               | 18                       | 9                       | 841  |        |
| HCSR                    | 90    | 3 $\frac{1}{2}$ x4 $\frac{1}{2}$ | 6    | 260                          | 3000           | 61                | 20               | 18                       | 9                       | 973  |        |
| LHS                     | 110   | 3 $\frac{1}{2}$ x4 $\frac{1}{2}$ | 6    | 260                          | 3400           | 50                | 20               | 18                       | 9                       | 888  |        |
| LHSR                    | 110   | 3 $\frac{1}{2}$ x4 $\frac{1}{2}$ | 6    | 260                          | 3400           | 61                | 20               | 18                       | 9                       | 995  |        |

\*Above models available for operation on fuel oil or kerosene

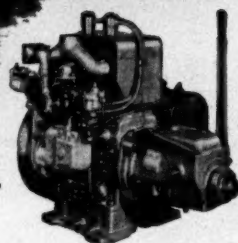
# "Big Engine" DEPENDABILITY

## for Smaller Craft with

### WISCONSIN *Air-Cooled* INBOARDS



4 to 7.5 hp. single-cylinder types, with reverse gear.



13 hp. 2-cylinder model, with reverse gear.

Here's power to please you in the 4 to 13 hp. range, whether you're assigning one of these dependable Wisconsin Air-Cooled Inboards to your pleasure boat, work boat, or to your sailing craft as a "stand by", ready to take over when sail power fails.

Every Wisconsin Inboard is equipped with such features as a weather-sealed rotary type OUTSIDE high tension magneto for fast starts and quick, easy servicing when needed, "auto type" shifting for complete power control, and electric starting if desired. Also, you have no cooling problems or bulky cooling installations to *make and maintain*, for Wisconsin Inboards are cooled by air alone—the last word in trouble-free cooling at all seasons. All models are compact, light weight 4-cycle types; no mixing of oil with fuel. Four models to choose from . . . 4-cycle, 4, 5.8, and 7½ hp. single-cylinder, and 13 hp. 2-cylinder types.

Write for bulletin S-116 and the name of your nearest Wisconsin Inboard distributor.

MOST  
H.P. HOURS



## WISCONSIN MOTOR CORPORATION

World's Largest Builders of Heavy Duty Air Cooled Engines

MILWAUKEE 26 WISCONSIN



| Model Name<br>or Number | H.P. | Bore<br>Stroke | Cyl. | Piston<br>Displ.<br>Cu. Ins. | Max.<br>R.P.M. | Inches            |               |                          |                         | Weight |
|-------------------------|------|----------------|------|------------------------------|----------------|-------------------|---------------|--------------------------|-------------------------|--------|
|                         |      |                |      |                              |                | Length<br>Overall | Max.<br>Width | Height<br>Above<br>Shaft | Depth<br>Below<br>Shaft |        |
| UNITED STATES MOTORS    |      |                |      |                              |                |                   |               |                          |                         |        |
| NM-1                    | 1½   | 2x2            | 1    | 6.28                         | 2800           | 11                | 13            | 10                       | ....                    | 40     |
| 2M-1                    | 1½   | 2x2            | 1    | 6.28                         | 2800           | 11                | 13            | 10                       | ....                    | 55     |
| AM-1                    | 2½   | 2½ x 2½        | 1    | 8.95                         | 2800           | 17                | 14            | 9                        | ....                    | 75     |
| 14M-1                   | 4½   | 3½ x 2½        | 1    | 14.21                        | 2800           | 17                | 15            | 9                        | ....                    | 95     |
| 2M-1                    | 7    | 3x3½           | 1    | 22.97                        | 2800           | 19                | 16            | 11                       | ....                    | 120    |
| 7M-1                    | 7    | 3x3½           | 1    | 22.97                        | 2800           | 19                | 16            | 11                       | ....                    | 135    |
| BX3S                    | 10   | 2½ x 3         | 2    | 39.0                         | 2200           | 26                | 19            | 13                       | ....                    | 260    |
| OK                      | 5    | 3½ x 4½        | 1    | 49.7                         | 1200           | 18                | 14            | 18                       | ....                    | 180    |
| TK                      | 10   | 3½ x 4½        | 2    | 99.4                         | 1200           | 34                | 14            | 18                       | ....                    | 335    |

**VIMALET CO.**

Allison Aircraft Engine

Conversion 400-1000 5½x6 12 1700 2600 96 45 39 17 2250

**WISCONSIN**

|     |     |       |   |      |      |    |    |    |   |     |
|-----|-----|-------|---|------|------|----|----|----|---|-----|
| ABM | 4   | 2½x2½ | 1 | 13.5 | 2800 | 14 | 12 | 14 | 5 | 105 |
| AKM | 5.4 | 2½x2½ | 1 | 17.8 | 2800 | 14 | 12 | 14 | 5 | 105 |
| AEM | 6.5 | 3x3½  | 1 | 23   | 2800 | 15 | 16 | 16 | 6 | 153 |
| TFM | 13  | 3½x3½ | 2 | 53.9 | 2400 | 29 | 22 | 25 | 7 | 260 |

**OUTBOARD ENGINES****CHAMPION**

|         |     |       |   |       |      |       |       |       |       |    |
|---------|-----|-------|---|-------|------|-------|-------|-------|-------|----|
| 1L      | 4.2 | 2x1½  | 1 | 5.84  | 4300 | ..... | ..... | ..... | ..... | 37 |
| 2K      | 4.2 | 2x1½  | 1 | 5.84  | 4300 | ..... | ..... | ..... | ..... | 39 |
| 4L      | 8.5 | 2½x1½ | 2 | 12.41 | 4200 | ..... | ..... | ..... | ..... | 61 |
| 2L-HD   | 4.2 | 2x1½  | 1 | 5.84  | 4300 | ..... | ..... | ..... | ..... | 40 |
| 4L-HD   | 8.5 | 1½x1½ | 2 | 12.41 | 4200 | ..... | ..... | ..... | ..... | 60 |
| 4L-S-1X | 8.5 | 2½x1½ | 2 | 12.41 | 4200 | ..... | ..... | ..... | ..... | 60 |

**CHRIS CRAFT**

|   |     |       |   |       |      |       |       |       |       |    |
|---|-----|-------|---|-------|------|-------|-------|-------|-------|----|
| J | 5.5 | 2x1½  | 2 | 9.42  | 4000 | ..... | ..... | ..... | ..... | 45 |
| K | 10  | 2½x2½ | 2 | 19.94 | 4000 | ..... | ..... | ..... | ..... | 63 |

**CORSAIR**

|      |      |       |   |       |      |       |       |       |       |    |
|------|------|-------|---|-------|------|-------|-------|-------|-------|----|
| 5020 | 3.6  | 2½x1½ | 1 | 6.21  | 4000 | ..... | ..... | ..... | ..... | 39 |
| 5021 | 4.0  | 2½x1½ | 1 | 6.21  | 4200 | ..... | ..... | ..... | ..... | 44 |
| 5027 | 5.0  | 1½x1½ | 2 | 7.48  | 4200 | ..... | ..... | ..... | ..... | 47 |
| 5023 | 7.5  | 2x1½  | 2 | 11.0  | 4200 | ..... | ..... | ..... | ..... | 64 |
| 5028 | 10.0 | 2½x2  | 2 | 14.19 | 4200 | ..... | ..... | ..... | ..... | 61 |

**EVINRUDE**

|            |      |       |   |       |      |       |       |       |       |     |
|------------|------|-------|---|-------|------|-------|-------|-------|-------|-----|
| Sportsman  | 1.5  | 1½x1½ | 1 | 3.1   | 4000 | ..... | ..... | ..... | ..... | 30  |
| Sportwin   | 3.3  | 1½x1½ | 1 | 6.22  | 4000 | ..... | ..... | ..... | ..... | 39  |
| Fleetwin   | 7.5  | 2½x1½ | 2 | 12.4  | 4000 | ..... | ..... | ..... | ..... | 60  |
| Fastwin    | 14   | 2½x2½ | 2 | 19.94 | 4000 | ..... | ..... | ..... | ..... | 68  |
| Speeditwin | 22.5 | 2½x2½ | 2 | 30    | 4000 | ..... | ..... | ..... | ..... | 115 |
| Bigtwin    | 25   | 2½x2½ | 2 | 35.7  | 4000 | ..... | ..... | ..... | ..... | 85  |

**FIRESTONE**

|         |     |       |   |      |      |    |    |    |    |    |
|---------|-----|-------|---|------|------|----|----|----|----|----|
| 10-A-71 | 3.6 | 2½x1½ | 1 | 6.23 | 4000 | 17 | 11 | 39 | 22 | 53 |
| 10-A-72 | 4.0 | 2½x1½ | 1 | 6.23 | 4000 | 20 | 11 | 40 | 22 | 70 |
| 10-A-73 | 5.0 | 1½x1½ | 1 | 7.48 | 4000 | 20 | 11 | 41 | 22 | 74 |
| 10-A-74 | 7.5 | 2x1½  | 2 | 11.0 | 4200 | 21 | 11 | 45 | 22 | 80 |
| 10-A-75 | 10  | 2½x2  | 2 | 14.9 | 4200 | 21 | 11 | 45 | 22 | 90 |

**ELGIN**

|      |    |       |   |      |      |       |       |       |       |     |
|------|----|-------|---|------|------|-------|-------|-------|-------|-----|
| 5830 | 1½ | 1½x1½ | 1 | 2.43 | 4000 | ..... | ..... | ..... | ..... | 19½ |
| 5840 | 2½ | 2x1½  | 1 | 4.9  | 4000 | ..... | ..... | ..... | ..... | 29½ |
| 5856 | 5  | 2x1½  | 2 | 10.6 | 4000 | ..... | ..... | ..... | ..... | 47½ |
| 5875 | 7½ | 2x1½  | 2 | 10.6 | 4000 | ..... | ..... | ..... | ..... | 48½ |
| 5882 | 16 | 2½x3  | 2 | 24.0 | 4000 | ..... | ..... | ..... | ..... | 92  |

**JOHNSON**

|              |      |       |   |      |      |    |    |       |       |    |
|--------------|------|-------|---|------|------|----|----|-------|-------|----|
| Sea Horse 2½ | 2.5  | 1½x1½ | 2 | 4.08 | 4000 | 37 | 10 | ..... | ..... | 31 |
| Sea Horse 5  | 5.0  | 2x1½  | 2 | 8.84 | 4000 | 40 | 11 | ..... | ..... | 44 |
| Sea Horse 10 | 10.0 | 2½x1½ | 2 | 16.6 | 4000 | 43 | 11 | ..... | ..... | 58 |
| Sea Horse 25 | 25   | 2½x2½ | 2 | 35.7 | 4000 | 46 | 12 | ..... | ..... | 85 |

| Model Name<br>or Number                   | H.P. | Bore<br>Stroke                    | Cyl. | Piston<br>Displ.<br>Cu. Ins. | Max.<br>R.P.M. | Inches            |                 |                          |                         | Weight |
|---|------|-----------------------------------|------|------------------------------|----------------|-------------------|-----------------|--------------------------|-------------------------|--------|
|   |      |                                   |      |                              |                | Length<br>Overall | Max.<br>Width   | Height<br>Above<br>Shaft | Depth<br>Below<br>Shaft |        |
| LAUSON                                    |      |                                   |      |                              |                |                   |                 |                          |                         |        |
| S-361 .....                               | 3    | 2 $\frac{1}{4}$ x1 $\frac{1}{2}$  | 1    | 6.29                         | 4000           | .....             | .....           | .....                    | .....                   | 44     |
| T-651 .....                               | 6    | 2 $\frac{1}{4}$ x1 $\frac{1}{2}$  | 2    | 12.58                        | 4000           | .....             | .....           | .....                    | .....                   | 57     |
| T-651R .....                              | 6    | 2 $\frac{1}{4}$ x1 $\frac{1}{2}$  | 2    | 12.58                        | 4000           | .....             | .....           | .....                    | .....                   | 63     |
| MARTIN                                    |      |                                   |      |                              |                |                   |                 |                          |                         |        |
| 20 .....                                  | 2.33 | 1 $\frac{1}{16}$ x1 $\frac{1}{2}$ | 1    | 2.88                         | 4300           | 36                | 9               | 8                        | 28                      | 30     |
| 45 S.T.* .....                            | 4.5  | 1 $\frac{1}{2}$ x1 $\frac{1}{2}$  | 2    | 5.76                         | 4200           | 37                | 9               | 9                        | 28                      | 36     |
| 75 S.T.* .....                            | 7.5  | 2x1 $\frac{1}{4}$                 | 2    | 11.00                        | 4000           | 39                | 10              | 11                       | 28                      | 44     |
| 100 .....                                 | 10.0 | 2 $\frac{1}{16}$ x1 $\frac{1}{4}$ | 2    | 13.15                        | 4800           | 40                | 12              | 11                       | 28                      | 56     |
| *Synchro-Twist (controls speed and spark) |      |                                   |      |                              |                |                   |                 |                          |                         |        |
| FLAMBEAU                                  |      |                                   |      |                              |                |                   |                 |                          |                         |        |
| 174520 .....                              | 2.5  | 2x1 $\frac{1}{2}$                 | 1    | 4.62                         | 4000           | 33                | 10              | .....                    | .....                   | 29     |
| 174060 .....                              | 5    | 2x1 $\frac{1}{2}$                 | 2    | 9.24                         | 4000           | 35                | 10              | .....                    | .....                   | 35     |
| SEA KING                                  |      |                                   |      |                              |                |                   |                 |                          |                         |        |
| 3S10W .....                               | 3.0  | 2 $\frac{1}{4}$ x1 $\frac{1}{2}$  | 1    | 5.32                         | 4000           | 36                | 9 $\frac{1}{2}$ | 32                       | 4                       | 28     |
| 5S10W .....                               | 5    | 2x1 $\frac{1}{4}$                 | 2    | 8.84                         | 4000           | 40 $\frac{1}{2}$  | 12              | 36                       | 5                       | 45     |
| 12S10W .....                              | 12   | 2 $\frac{3}{8}$ x2 $\frac{1}{4}$  | 2    | 19.94                        | 4000           | 43                | 13              | 37                       | 6 $\frac{1}{2}$         | 66     |
| SCOTT-ATWATER                             |      |                                   |      |                              |                |                   |                 |                          |                         |        |
| 1-12 Non-shift .....                      | 3.6  | 2 $\frac{1}{4}$ x1 $\frac{1}{4}$  | 1    | 6.21                         | 4000           | .....             | .....           | .....                    | .....                   | .....  |
| 1-14 Shift .....                          | 4.0  | 2 $\frac{1}{4}$ x1 $\frac{1}{4}$  | 1    | 6.21                         | 4200           | .....             | .....           | .....                    | .....                   | .....  |
| 1-20 Shift .....                          | 7.5  | 2x1 $\frac{1}{4}$                 | 2    | 11.0                         | 4200           | .....             | .....           | .....                    | .....                   | .....  |
| 1-16 Shift .....                          | 5.0  | 1 $\frac{1}{2}$ x1 $\frac{1}{4}$  | 2    | 7.48                         | 4200           | .....             | .....           | .....                    | .....                   | .....  |
| 1-30 Shift .....                          | 16.0 | 2 $\frac{3}{8}$ x2 $\frac{1}{4}$  | 2    | 19.95                        | 4200           | .....             | .....           | .....                    | .....                   | .....  |
| 1-25 Shift .....                          | 10.0 | 2 $\frac{1}{4}$ x2                | 2    | 14.19                        | 4200           | .....             | .....           | .....                    | .....                   | .....  |
| WEST BEND                                 |      |                                   |      |                              |                |                   |                 |                          |                         |        |
| 15030 .....                               | 1.25 | 1 $\frac{1}{2}$ x1 $\frac{1}{8}$  | 1    | 2.43                         | 4000           | .....             | .....           | .....                    | .....                   | 19.5   |
| 15040 .....                               | 2.5  | 2x1 $\frac{1}{2}$                 | 1    | 4.9                          | 4000           | .....             | .....           | .....                    | .....                   | 29.5   |
| 15056 .....                               | 5.0  | 2x1 $\frac{1}{4}$                 | 2    | 10.6                         | 4000           | .....             | .....           | .....                    | .....                   | 47.75  |
| 15075 .....                               | 7.5  | 2x1 $\frac{1}{4}$                 | 2    | 10.6                         | 4000           | .....             | .....           | .....                    | .....                   | 48.25  |
| 15082 .....                               | 16   | 2 $\frac{1}{2}$ x2                | 2    | 24                           | 4000           | .....             | .....           | .....                    | .....                   | 92.    |



### STORM KING BOATS

Rugged, sturdy, durable sedans, runabouts, inboard and outboard. Available in 14', 16' and 18' models.

**MORRIS, Inc.**

14th St. Yacht Basin, Everett, Wn.

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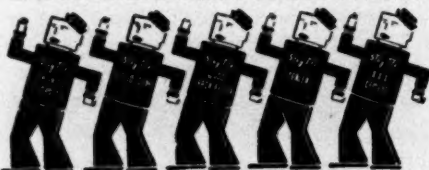
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- ★ Automatic Throttles
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## Use STAY-TITE Marine Products

For Boats of All Types. Long-lasting. Economical. Waterproof. Easily applied. Favorites among boat owners and builders for over a generation.

Dealers Write for nearest jobber's name.

**STAY-TITE PRODUCTS CO.**

Dept. 10, 3167 Detroit Ave. Cleveland 13, Ohio

# DIESEL MARINE ENGINES-1950

| Model Name<br>or Number  | H.P. | Bore<br>Stroke | Cyl. | Piston<br>Displ.<br>Cu. Ins. | Max.<br>R.P.M. | Inches            |               |                          |                         |       | Weight |
|--|------|----------------|------|------------------------------|----------------|-------------------|---------------|--------------------------|-------------------------|-------|--------|
|  |      |                |      |                              |                | Length<br>Overall | Max.<br>Width | Height<br>Above<br>Shaft | Depth<br>Below<br>Shaft |       |        |
| ATLAS  |      |                |      |                              |                |                   |               |                          |                         |       |        |
| 4EM327   | 80   | 7x8½           | 4    | 327                          | 650            | 110               | 46            | 46                       | 16                      | 8330  |        |
| 4HM528   | 85   | 8x10½          | 4    | 528                          | 450            | 136               | 43            | 57                       | 12                      | 11300 |        |
| 4HM763   | 110  | 9x12           | 4    | 768                          | 325            | 154               | 47            | 60                       | 12                      | 14780 |        |
| 4KM668RG   | 150  | 9x10½          | 4    | 668                          | 600            | 147               | 55            | 50                       | 17                      | 16500 |        |
| 6EM-327  | 120  | 7x8½           | 6    | 327                          | 650            | 134               | 42            | 52                       | 16                      | 10600 |        |
| 4HM1125  | 155  | 10½x13         | 4    | 1125                         | 350            | 163               | 51            | 65                       | 17                      | 17400 |        |
| 5KM668RG   | 185  | 9x10½          | 5    | 668                          | 600            | 163               | 55            | 50                       | 17                      | 18000 |        |
| 6HM1125  | 250  | 10½x13         | 6    | 1125                         | 350            | 190               | 52            | 65                       | 17                      | 26750 |        |
| 6KM668RG   | 275  | 9x10½          | 6    | 668                          | 750            | 178               | 55            | 50                       | 17                      | 21000 |        |
| 6HM1588  | 350  | 11½x15         | 6    | 1558                         | 360            | 202               | 62            | 77                       | 20                      | 38900 |        |
| 3KM668RG   | 365  | 9x10½          | 8    | 668                          | 750            | 208               | 55            | 57                       | 17                      | 25500 |        |
| 3KM668DR   | 375  | 9x10½          | 8    | 668                          | 750            | 188               | 55            | 50                       | 17                      | 24000 |        |
| 6KMT668RG  | 415  | 9x10½          | 6    | 668                          | 750            | 178               | 55            | 70                       | 17                      | 22000 |        |
| 6KMT668DR  | 425  | 9x10½          | 6    | 668                          | 750            | 158               | 55            | 70                       | 17                      | 21000 |        |
| 6HM2124  | 425  | 13x16          | 6    | 2124                         | 325            | 230               | 75            | 82                       | 20                      | 46870 |        |
| 8KMT668RG  | 550  | 9x10½          | 8    | 668                          | 750            | 208               | 55            | 70                       | 17                      | 26700 |        |
| 6HMT2124   | 600  | 13x16          | 6    | 2124                         | 325            | 230               | 75            | 87                       | 21                      | 48770 |        |
| 8KMT668DR  | 570  | 9x10½          | 8    | 668                          | 750            | 188               | 55            | 70                       | 18                      | 25700 |        |
| 6HM3358  | 650  | 15x19          | 6    | 3358                         | 325            | 268               | 89            | 100                      | 27                      | 79000 |        |
| 6HMT3358   | 1000 | 15x19          | 6    | 3358                         | 325            | 268               | 89            | 106                      | 27                      | 79000 |        |
| BUDA   |      |                |      |                              |                |                   |               |                          |                         |       |        |
| 2-BDMR-77  | 15   | 3½x4½          | 2    | 77                           | 2000           | 38                | 26            | 23                       | 10                      | 720   |        |
| 4-BDMR-153   | 40   | 3½x4½          | 4    | 153                          | 2400           | 46                | 26            | 23                       | 10                      | 625   |        |
| 6-BDMR-230   | 60   | 3½x4½          | 6    | 230                          | 2400           | 56                | 26            | 23                       | 11                      | 1350  |        |
| 6-BDMR-273   | 70   | 3½x4½          | 6    | 273                          | 2400           | 56                | 26            | 23                       | 11                      | 1300  |        |
| 6-DTMR-317   | 85   | 3½x5½          | 6    | 317                          | 2100           | 66                | 29            | 32                       | 13                      | 1795  |        |
| 6-DTMR-468   | 113  | 4½x5½          | 6    | 468                          | 2000           | 72                | 29            | 34                       | 14                      | 2140  |        |
| 6-DAMR-844   | 215  | 5½x6½          | 6    | 844                          | 2000           | 77                | 32            | 31                       | 12                      | 3699  |        |
| 6-DASMR-844  | 280  | 5½x6½          | 6    | 844                          | 2000           | 77                | 32            | 31                       | 12                      | 4190  |        |
| 8-DAMR-1125  | 243  | 5½x6½          | 8    | 1125                         | 2000           | 101               | 36            | 30                       | 15                      | 4690  |        |
| 8-DASMR-1125   | 310  | 5½x6½          | 8    | 1125                         | 2000           | 101               | 39            | 30                       | 15                      | 4690  |        |
| 6-DCMR-1879  | 254  | 6½x8½          | 6    | 1879                         | 1200           | 112               | 40            | 47                       | 15                      | 8350  |        |
| 6-DCSMR-1879   | 292  | 6½x8½          | 6    | 1879                         | 1200           | 112               | 48            | 47                       | 15                      | 8650  |        |
| 8-DCMR-2505  | 347  | 6½x8½          | 8    | 2505                         | 1300           | 133               | 48            | 47                       | 19                      | 10650 |        |
| 8-DCSMR-2505   | 445  | 6½x8½          | 8    | 2505                         | 1300           | 136               | 50            | 47                       | 19                      | 11350 |        |
| CATERPILLAR  |      |                |      |                              |                |                   |               |                          |                         |       |        |
| D397   | 400  | 5½x8           | V12  | 2493                         | 1200           | 148               | 49            | 65                       | 12                      | 14000 |        |
| D386   | 320  | 5½x8           | V12  | 2493                         | 1200           | 148               | 49            | 60                       | 12                      | 13770 |        |
| D375   | 270  | 5½x8           | V8   | 1662                         | 1200           | 116               | 49            | 65                       | 9                       | 11450 |        |
| D364   | 215  | 5½x8           | V8   | 1662                         | 1200           | 116               | 49            | 60                       | 9                       | 11270 |        |
| D17000   | 150  | 5½x8           | V8   | 1662                         | 1000           | 113               | 50            | 55                       | 10                      | 9638  |        |
| D13000   | 120  | 5½x8           | 6    | 1246                         | 1000           | 120               | 41            | 54                       | 7                       | 7450  |        |
| D8800  | 82   | 5½x8           | 4    | 831                          | 1000           | 91                | 45            | 51                       | 7                       | 5390  |        |
| D318   | 80   | 4½x5½          | 6    | 525                          | 1600           | 86                | 30            | 44                       | 8                       | 3650  |        |
| D315   | 53   | 4½x5½          | 4    | 350                          | 1600           | 70                | 30            | 42                       | 6                       | 2560  |        |
| D811   | 38   | 4x5            | 4    | 252                          | 1600           | 65                | 31            | 37                       | 5                       | 2600  |        |
| NOTE: Weight and dimensions are for standard marine engine equipment with 3.00 approx. ratio reverse and reduction gear. |      |                |      |                              |                |                   |               |                          |                         |       |        |
| COOPER-BESSEMER  |      |                |      |                              |                |                   |               |                          |                         |       |        |
| FV-6-MG  | 360  | 9x10½          | 6    | .....                        | 900            | 171               | 70            | 57                       | 34                      | 20100 |        |
| FV-8-MG  | 485  | 9x10½          | 8    | .....                        | 900            | 186               | 70            | 57                       | 34                      | 26950 |        |
| FV-12-MG   | 728  | 9x10½          | 12   | .....                        | 900            | 220               | 70            | 57                       | 34                      | 36750 |        |
| FV-16-MG   | 970  | 9x10½          | 16   | .....                        | 900            | 262               | 70            | 57                       | 34                      | 46600 |        |
| FV-6-MGT   | 533  | 9x10½          | 6    | .....                        | 900            | 171               | 70            | 61                       | 34                      | 24850 |        |
| FV-8-MGT   | 718  | 9x10½          | 8    | .....                        | 900            | 186               | 70            | 61                       | 34                      | 30450 |        |
| FV-12-MGT  | 1065 | 9x10½          | 12   | .....                        | 900            | 255               | 72            | 61                       | 34                      | 45750 |        |
| FV-16-MGT  | 1440 | 9x10½          | 16   | .....                        | 900            | 303               | 72            | 61                       | 34                      | 53800 |        |
| GS-6-DR  | 600  | 10½x13½        | 6    | .....                        | 750            | 175               | 57            | 67                       | 22                      | 27000 |        |
| GS-6-DRT   | 800  | 10½x13½        | 6    | .....                        | 750            | 178               | 57            | 67                       | 22                      | 27750 |        |
| GS-8-DR  | 800  | 10½x13½        | 8    | .....                        | 750            | 208               | 57            | 67                       | 22                      | 33000 |        |

## BUDA ENGINE Sales and Service

Diversified horsepower — from 4 to 400 hp.  
Also, diesel generator sets

Both Gas  
and  
Diesel

**BUDA ENGINE AND EQUIPMENT CO., Inc.**

3407 Airport Way

SEATTLE, WASH

SEneca 1230

For Yachts  
and  
Work Boats

| Model Name<br>or Number | H.P. | Bore<br>Stroke | Cyl. | Piston<br>Displ.<br>Cu. Ins. | Max.<br>R.P.M. | Inches            |               |                          |                         | Weight |
|-------------------------|------|----------------|------|------------------------------|----------------|-------------------|---------------|--------------------------|-------------------------|--------|
|                         |      |                |      |                              |                | Length<br>Overall | Max.<br>Width | Height<br>Above<br>Shaft | Depth<br>Below<br>Shaft |        |
| GS-8-DRT                | 1060 | 10½x13½        | 8    | 750                          | 210            | 57                | 67            | 22                       | 34000                   |        |
| JS-6-DR                 | 745  | 13x16          | 6    | 514                          | 177            | 54                | 79            | 26                       | 49000                   |        |
| JS-6-DRT                | 995  | 13x16          | 6    | 514                          | 177            | 72                | 79            | 26                       | 44000                   |        |
| JS-8-DR                 | 995  | 13x16          | 8    | 514                          | 216            | 54                | 79            | 26                       | 51000                   |        |
| JS-8-DRT                | 1320 | 13x16          | 8    | 514                          | 216            | 72                | 79            | 26                       | 52000                   |        |
| LS-6-DR                 | 1020 | 15½x22         | 6    | 360                          | 239            | 78                | 120           | 29                       | 85000                   |        |
| LS-8-DR                 | 1355 | 15½x22         | 8    | 360                          | 287            | 78                | 120           | 29                       | 109000                  |        |
| LS-6-DRT                | 1355 | 15½x22         | 6    | 360                          | 239            | 80                | 120           | 29                       | 86000                   |        |
| LS-8-DRT                | 1810 | 15½x22         | 8    | 360                          | 287            | 80                | 120           | 29                       | 104000                  |        |
| LS-12-DR                | 1850 | 15½x22         | 12   | 327                          | 243            | 132               | 117           | 39                       | 161000                  |        |
| LSV-12-DRT              | 2700 | 15½x22         | 12   | 327                          | 263            | 132               | 117           | 39                       | 164000                  |        |
| LSV-16-DR               | 2640 | 15½x22         | 16   | 327                          | 298            | 132               | 117           | 39                       | 194000                  |        |
| LSV-16-DRT              | 3600 | 15½x22         | 16   | 327                          | 341            | 132               | 117           | 39                       | 199000                  |        |

## CLEVELAND — G. M.

|         |       |                |    |         |      |       |       |       |       |       |
|---------|-------|----------------|----|---------|------|-------|-------|-------|-------|-------|
| 3-268A  | ..... | 6 1/2 x 7      | 3  | 696.8   | 1900 | ..... | ..... | ..... | ..... | 4500  |
| 4-268A  | ..... | 6 1/2 x 7      | 4  | 929.1   | 1900 | ..... | ..... | ..... | ..... | 5400  |
| 6-268A  | ..... | 6 1/2 x 7      | 6  | 1393.7  | 1900 | ..... | ..... | ..... | ..... | 6800  |
| 8-268A  | ..... | 6 1/2 x 7      | 8  | 1858.3  | 1900 | ..... | ..... | ..... | ..... | 8400  |
| 6-278A  | ..... | 8 3/4 x 10 1/2 | 6  | 3788.3  | 750  | ..... | ..... | ..... | ..... | 15000 |
| 8-278A  | ..... | 8 3/4 x 10 1/2 | 8  | 5061.0  | 750  | ..... | ..... | ..... | ..... | 18000 |
| 12-278A | ..... | 8 3/4 x 10 1/2 | 12 | 7576.6  | 750  | ..... | ..... | ..... | ..... | 24000 |
| 16-278A | ..... | 8 3/4 x 10 1/2 | 16 | 10102.0 | 750  | ..... | ..... | ..... | ..... | 29500 |

## CUMMINS

|           |       |            |    |      |      |    |    |    |    |      |
|-----------|-------|------------|----|------|------|----|----|----|----|------|
| AM-600    | ..... | 4x5        | 6  | 377  | 2200 | 47 | 29 | 29 | 10 | 1519 |
| HM-400    | ..... | 4 1/2 x 6  | 4  | 448  | 1800 | 44 | 30 | 35 | 11 | 1720 |
| HRM-400   | ..... | 5 1/4 x 6  | 4  | 495  | 1800 | 44 | 30 | 35 | 11 | 1715 |
| HM-600    | ..... | 4 1/2 x 6  | 6  | 672  | 1800 | 58 | 30 | 35 | 11 | 2490 |
| HRM-600   | ..... | 5 1/4 x 6  | 6  | 743  | 1800 | 58 | 30 | 35 | 12 | 2495 |
| NHM-600   | ..... | 5 1/4 x 6  | 6  | 743  | 2100 | 60 | 32 | 36 | 12 | 2700 |
| NHMS-600  | ..... | 5 1/4 x 6  | 6  | 743  | 2100 | 60 | 32 | 36 | 12 | 2625 |
| NHRM-600  | ..... | 5 1/4 x 6  | 6  | 743  | 2100 | 60 | 32 | 36 | 12 | 2895 |
| NVHM-600  | ..... | 5 1/4 x 6  | 12 | 1486 | 2100 | 73 | 41 | 37 | 21 | 4900 |
| NVHMS-600 | ..... | 5 1/4 x 6  | 12 | 1486 | 2100 | 73 | 42 | 37 | 21 | 4550 |
| LM-600    | ..... | 7x10       | 6  | 2309 | 1000 | 95 | 46 | 44 | 15 | 9240 |
| LRM-600   | ..... | 7 1/4 x 10 | 6  | 2477 | 1100 | 95 | 46 | 44 | 15 | 9240 |

## DETROIT — G. M.

|                        |       |           |    |        |      |     |    |    |    |       |
|------------------------|-------|-----------|----|--------|------|-----|----|----|----|-------|
| 2-71 Pleasure Craft    | ..... | 4 1/2 x 5 | 2  | 141.9  | 2000 | 51  | 30 | 30 | 6  | 1300  |
| 2-71 Work Boat         | ..... | 4 1/2 x 5 | 2  | 141.9  | 1800 | 51  | 30 | 30 | 6  | 1300  |
| 3-71 Pleasure Craft    | ..... | 4 1/2 x 5 | 3  | 212.8  | 2000 | 56  | 33 | 33 | 8  | 2020  |
| 3-71 Work Boat         | ..... | 4 1/2 x 5 | 3  | 212.8  | 1800 | 56  | 33 | 33 | 8  | 2020  |
| 4-71 Pleasure Craft    | ..... | 4 1/2 x 5 | 4  | 283.7  | 2000 | 62  | 33 | 33 | 8  | 2410  |
| 4-71 Work Boat         | ..... | 4 1/2 x 5 | 4  | 283.7  | 1800 | 62  | 33 | 33 | 8  | 2410  |
| 6-71 Pleasure Craft    | ..... | 4 1/2 x 5 | 6  | 425.6  | 2000 | 73  | 33 | 33 | 8  | 2645  |
| 6-71 Work Boat         | ..... | 4 1/2 x 5 | 6  | 425.6  | 1800 | 73  | 33 | 33 | 8  | 2645  |
| Twin-6 Pleasure Craft  | ..... | 4 1/2 x 5 | 12 | 851.2  | 2000 | 80  | 55 | 38 | 16 | 6400  |
| Twin-6 Work Boat       | ..... | 4 1/2 x 5 | 12 | 851.2  | 1800 | 80  | 55 | 38 | 16 | 6400  |
| Tandem Twin-6 Pl. Boat | ..... | 4 1/2 x 5 | 12 | 851.2  | 2000 | 129 | 37 | 42 | 15 | 7550  |
| Tandem Tw.-6 Wk. Boat  | ..... | 4 1/2 x 5 | 12 | 851.2  | 1800 | 129 | 37 | 42 | 15 | 7550  |
| Quad-6 Pleasure Craft  | ..... | 4 1/2 x 5 | 24 | 1702.4 | 2000 | 128 | 56 | 38 | 16 | 12600 |
| Quad-6 Work Boat       | ..... | 4 1/2 x 5 | 24 | 1702.4 | 1800 | 128 | 56 | 38 | 16 | 12600 |
| 6-110 Pleasure Craft   | ..... | 5x5 1/2   | 6  | 660    | 1800 | 99  | 35 | 40 | 8  | 4000  |
| 6-110 Work Boat        | ..... | 5x5 1/2   | 6  | 660    | 1600 | 99  | 35 | 40 | 8  | 4000  |

Pleasure Craft: Rated SHP; Work Boat: Continuous SHP.  
Weights and Dimensions vary with Gear Selected.

## ENTERPRISE

|         |       |             |   |     |     |        |        |        |       |
|---------|-------|-------------|---|-----|-----|--------|--------|--------|-------|
| DM-3    | ..... | 8x10        | 3 | 600 | 84  | 47     | 46     | 13     | 5000  |
| DM-13   | ..... | 8x10        | 3 | 750 | 84  | 47     | 46     | 13     | 5000  |
| DM-4    | ..... | 8x10        | 4 | 600 | 100 | 47     | 46     | 13     | 6500  |
| DM-14   | ..... | 8x10        | 4 | 750 | 100 | 47     | 46     | 13     | 6500  |
| DM-6    | ..... | 8x10        | 6 | 600 | 124 | 47     | 46     | 13     | 9000  |
| DM-16   | ..... | 8x10        | 6 | 750 | 124 | 47     | 46     | 13     | 9000  |
| DMX-6   | ..... | 10 1/2 x 12 | 6 | 550 | 175 | 39     | 66 1/4 | 16 1/2 | 26000 |
| DMX-16  | ..... | 10 1/2 x 12 | 6 | 600 | 175 | 39     | 66 1/4 | 16 1/2 | 26000 |
| DMX-36  | ..... | 10 1/2 x 12 | 6 | 550 | 175 | 39     | 66 1/4 | 16 1/2 | 28000 |
| DMX-316 | ..... | 10 1/2 x 12 | 6 | 600 | 175 | 39     | 66 1/4 | 16 1/2 | 28000 |
| DMG-6   | ..... | 12x15       | 6 | 450 | 175 | 46 1/4 | 75 1/2 | 18     | 34500 |
| DMG-16  | ..... | 12x15       | 6 | 600 | 183 | 46 1/4 | 75 1/2 | 18     | 34500 |
| DMG-36  | ..... | 12x15       | 6 | 450 | 193 | 46 1/4 | 75 1/2 | 18     | 36000 |
| DMG-316 | ..... | 12x15       | 6 | 600 | 193 | 46 1/4 | 75 1/2 | 18     | 36000 |
| DMG-8   | ..... | 12x15       | 8 | 450 | 193 | 46 1/4 | 75 1/2 | 18     | 45000 |
| DMG-18  | ..... | 12x15       | 8 | 600 | 227 | 46 1/4 | 75 1/2 | 18     | 45000 |
| DMG-38  | ..... | 12x15       | 8 | 450 | 227 | 46 1/4 | 75 1/2 | 18     | 47000 |
| DMG-318 | ..... | 12x15       | 8 | 600 | 227 | 46 1/4 | 75 1/2 | 18     | 47000 |
| DMQ-6   | ..... | 16x20       | 6 | 327 | 272 | 60     | 98     | 26     | 79000 |



# THE COOPER-BESSEMER CORPORATION

## MOUNT VERNON, OHIO

Plants: Mount Vernon, Ohio, and Grove City, Pa.

### WEST COAST OFFICES

640 East 61st St., Los Angeles, Calif. — 570 First Avenue South, Seattle, Wash.  
29 Pine St., San Francisco, Calif.

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New York

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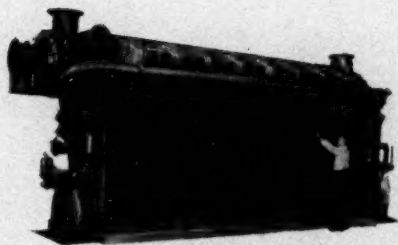
St. Louis

Houston

Gloucester, Massachusetts

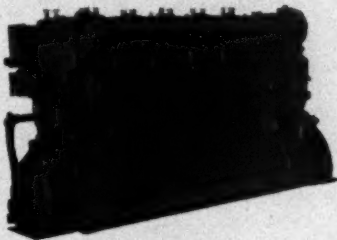
Calmes Engineering Company, New Orleans

The offices listed above will gladly furnish detailed information concerning any model in the complete line of Cooper-Bessemer marine and stationary diesel engines. All C-B Diesels feature patented T-type wristpin bearings for longer bearing wear and minimum maintenance, full-pressure lubrication throughout, and the patented controlled-pressure fuel system for maximum economy and engine efficiency. Horsepower ratings depend upon types of services for which the engines are intended.



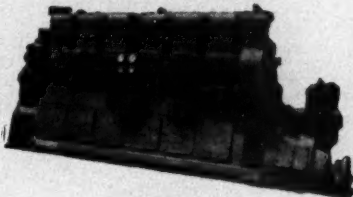
**TYPE LSV**

Type LSV—Four cycle, marine and stationary diesel engines, built in four and six-cylinder units and rated 1500 to 3700 horsepower. (Supercharged stationary unit illustrated).



**TYPE GS**

Type GS—Four cycle, marine and stationary types with oil-cooled pistons. Built in six- and eight-cylinder units and rated 350 to 960 horsepower.



**TYPE JS**

Type JS—Four cycle, marine and stationary types with oil-cooled pistons. Built in 6- and 8-cylinder units. Rated 500 to 1300 horsepower.



**TYPE LS**

Type LS—Four cycle, marine and stationary types with oil-cooled pistons. Built in 6-, 7- and 8-cylinder units and rated 750 to 1850 horsepower.

Supercharging by means of the efficient exhaust-turbo-blower method, is available for all Cooper-Bessemer Diesel Engines and offers an approximate increase in horsepower of 30 to 50%

| Model Name<br>or Number        | H.P. | Bore<br>Stroke | Cyl. | Piston<br>Displ.<br>Cu. Ins. | Max.<br>R.P.M. | Inches            |              |                          |                         | Weight |
|--------------------------------|------|----------------|------|------------------------------|----------------|-------------------|--------------|--------------------------|-------------------------|--------|
|                                |      |                |      |                              |                | Length<br>Overall | Max<br>Width | Height<br>Above<br>Shaft | Depth<br>Below<br>Shaft |        |
| DMQ-16 .....                   | 875  | 16x20          | 6    | 360                          | 272            | 272               | 60           | 98                       | 26                      | 79000  |
| DMQ-36 .....                   | 1195 | 16x20          | 6    | 327                          | 272            | 272               | 60           | 98                       | 26                      | 80000  |
| DMQ-316 .....                  | 1315 | 16x20          | 6    | 360                          | 272            | 272               | 60           | 98                       | 26                      | 80000  |
| DMQ-8 .....                    | 1060 | 16x20          | 8    | 327                          | 320            | 320               | 60           | 98                       | 26                      | 96000  |
| DMQ-18 .....                   | 1170 | 16x20          | 8    | 360                          | 320            | 320               | 60           | 98                       | 26                      | 96000  |
| DMQ-38 .....                   | 1595 | 16x10          | 8    | 327                          | 320            | 320               | 60           | 98                       | 26                      | 97000  |
| DMQ-318 .....                  | 1755 | 16x20          | 8    | 360                          | 320            | 320               | 60           | 98                       | 26                      | 97000  |
| <b>FLAGSHIP</b>                |      |                |      |                              |                |                   |              |                          |                         |        |
| 248LD .....                    | 100  | 3½x4           | 6    | 248                          | 2800           | 50                | 25           | 20                       | 10                      | 1245   |
| <b>GRAY</b>                    |      |                |      |                              |                |                   |              |                          |                         |        |
| Four-D157 .....                | 30   | 3½x4½          | 4    | 157                          | 1800           | 49                | 21           | 26                       | 5                       | 1100   |
| Four-D260 .....                | 50   | 3½x5½          | 4    | 260                          | 1800           | 54                | 22           | 30                       | 5                       | 1400   |
| Six-D572 .....                 | 135  | 4½x5½          | 6    | 572                          | 2200           | 72-78             | 24           | 29                       | 11                      | 2700   |
| <b>HALLETT</b>                 |      |                |      |                              |                |                   |              |                          |                         |        |
| AC1 .....                      | 5    | 3½x3½          | 1    | 34.8                         | 2000           | 27                | 15           | 17                       | 7                       | 220    |
| D1A, D1M .....                 | 8    | 3½x4½          | 1    | 50                           | 1800           | 38                | 24           | 30                       | 13                      | 635    |
| D2, D2M .....                  | 18   | 3½x4½          | 2    | 100                          | 1800           | 41                | 23           | 24                       | 8                       | 895    |
| <b>P &amp; H HARNISCHFEGER</b> |      |                |      |                              |                |                   |              |                          |                         |        |
| 187-CM .....                   | 25   | 4½x5½          | 2    | 87.5                         | 1400           | 25½               | ---          | 29                       | 11½                     | 1180   |
| 287-CM .....                   | 58   | 4½x5½          | 2    | 174                          | 1400           | 32½               | ---          | 29                       | 11½                     | 1350   |
| 387-CM .....                   | 87   | 4½x5½          | 3    | 261                          | 1400           | 42½               | ---          | 29                       | 11½                     | 1775   |
| 487-CM .....                   | 117  | 4½x5½          | 4    | 348                          | 1400           | 45½               | ---          | 29                       | 11½                     | 2175   |
| 687-CM .....                   | 175  | 4½x5½          | 6    | 522                          | 1400           | 62½               | ---          | 29                       | 11½                     | 2950   |
| <b>KAHLENBERG</b>              |      |                |      |                              |                |                   |              |                          |                         |        |
| AD .....                       | 36   | 8½x9           | 2    | 1021                         | 400            | ---               | ---          | ---                      | ---                     | 5450   |
| AT .....                       | 54   | 8½x9           | 3    | 1532                         | 400            | ---               | ---          | ---                      | ---                     | 6500   |
| BD .....                       | 60   | 10x10½         | 2    | 1649                         | 400            | ---               | ---          | ---                      | ---                     | 7300   |
| AF .....                       | 70   | 8½x9           | 4    | 2043                         | 400            | ---               | ---          | ---                      | ---                     | 8200   |
| BT .....                       | 90   | 10x10½         | 3    | 2474                         | 400            | ---               | ---          | ---                      | ---                     | 9700   |
| BF .....                       | 120  | 10x10½         | 4    | 3299                         | 400            | ---               | ---          | ---                      | ---                     | 11980  |
| B5 .....                       | 150  | 10x10½         | 5    | 4123                         | 375            | ---               | ---          | ---                      | ---                     | 15650  |
| CT .....                       | 150  | 12½x14         | 3    | 5154                         | 325            | ---               | ---          | ---                      | ---                     | 21800  |
| B6 .....                       | 180  | 10x10½         | 6    | 4948                         | 375            | ---               | ---          | ---                      | ---                     | 17050  |
| CF .....                       | 200  | 12½x14         | 4    | 6872                         | 325            | ---               | ---          | ---                      | ---                     | 23900  |
| C5 .....                       | 250  | 12½x14         | 5    | 8590                         | 325            | ---               | ---          | ---                      | ---                     | 29000  |
| C6 .....                       | 300  | 12½x14         | 6    | 10908                        | 325            | ---               | ---          | ---                      | ---                     | 34000  |
| <b>KERMATH</b>                 |      |                |      |                              |                |                   |              |                          |                         |        |
| 2-127 .....                    | 27   | 4½x4½          | 2    | 127                          | 1800           | 37                | 26           | 21                       | 10                      | 900    |
| 4-226 .....                    | 60   | 4x4½           | 4    | 226                          | 2200           | 48                | 24           | 23                       | 10                      | 1240   |
| 6-298 .....                    | 75   | 3½x4½          | 6    | 298                          | 2000           | 55                | 25           | 23                       | 10                      | 1550   |
| 6-529 .....                    | 130  | 4½x5½          | 6    | 529                          | 1800           | 62                | 28           | 27                       | 11                      | 2450   |
| 6-935 .....                    | 250  | 5½x6           | 6    | 935                          | 2000           | 88                | 37           | 36                       | 15                      | 5000   |
| <b>LATHROP</b>                 |      |                |      |                              |                |                   |              |                          |                         |        |
| D-50 .....                     | 50   | 5½x7           | 4    | 685                          | 800            | 75                | 30           | 31                       | 10                      | 3000   |
| D-60 .....                     | 60   | 5½x7           | 4    | 665                          | 900            | 75                | 30           | 31                       | 10                      | 3000   |
| D-80 .....                     | 80   | 5½x7           | 6    | 998                          | 800            | 96                | 30           | 31                       | 10                      | 4200   |
| D-90 .....                     | 90   | 5½x7           | 6    | 998                          | 900            | 96                | 30           | 31                       | 10                      | 4200   |
| D-100 .....                    | 100  | 5½x7           | 6    | 998                          | 1000           | 92                | 28           | 31                       | 11                      | 4000   |
| DH-200 .....                   | 187  | 5½x6           | 6    | 935                          | 1600           | 96                | 41           | 43                       | 9                       | .....  |
| <b>LISTER-BLACKSTONE, INC.</b> |      |                |      |                              |                |                   |              |                          |                         |        |
| 3-1 .....                      | 3.5  | 3½x5½          | 1    | 650                          | ---            | ---               | ---          | ---                      | ---                     | 750    |
| 5-1 .....                      | 6    | 4½x5½          | 1    | 650                          | ---            | ---               | ---          | ---                      | ---                     | 760    |
| 10-2 .....                     | 12   | 4½x5½          | 2    | 650                          | ---            | ---               | ---          | ---                      | ---                     | 1180   |
| CD .....                       | 8    | 4½x4½          | 1    | 1200                         | ---            | ---               | ---          | ---                      | ---                     | 980    |
| CE .....                       | 16   | 4½x4½          | 2    | 1200                         | ---            | ---               | ---          | ---                      | ---                     | 1390   |
| 9-1 .....                      | 9    | 4½x5½          | 1    | 1000                         | ---            | ---               | ---          | ---                      | ---                     | 1175   |
| 18-2 .....                     | 21   | 4½x5½          | 2    | 1200                         | ---            | ---               | ---          | ---                      | ---                     | 1625   |
| 27-3 .....                     | 30   | 4½x5½          | 3    | 1200                         | ---            | ---               | ---          | ---                      | ---                     | 2040   |
| 38-4 .....                     | 40   | 4½x5½          | 4    | 1200                         | ---            | ---               | ---          | ---                      | ---                     | 2275   |
| 616 .....                      | 63   | 4½x5½          | 6    | 1200                         | ---            | ---               | ---          | ---                      | ---                     | 3000   |
| EV2 .....                      | 90   | 8½x11½         | 2    | 600                          | ---            | ---               | ---          | ---                      | ---                     | 9575   |
| EV3 .....                      | 135  | 8½x11½         | 3    | 600                          | ---            | ---               | ---          | ---                      | ---                     | 10375  |
| EV4 .....                      | 180  | 8½x11½         | 4    | 600                          | ---            | ---               | ---          | ---                      | ---                     | 10960  |
| EV5 .....                      | 225  | 8½x11½         | 5    | 600                          | ---            | ---               | ---          | ---                      | ---                     | 14160  |
| EV6 .....                      | 270  | 8½x11½         | 6    | 600                          | ---            | ---               | ---          | ---                      | ---                     | 15660  |
| EV8 .....                      | 360  | 8½x11½         | 8    | 600                          | ---            | ---               | ---          | ---                      | ---                     | 18860  |
| EV84 .....                     | 240  | 8½x11½         | 4    | 600                          | ---            | ---               | ---          | ---                      | ---                     | 11560  |
| EV86 .....                     | 360  | 8½x11½         | 6    | 600                          | ---            | ---               | ---          | ---                      | ---                     | 15960  |
| EV88 .....                     | 480  | 8½x11½         | 8    | 600                          | ---            | ---               | ---          | ---                      | ---                     | 19360  |
| A.S.1 .....                    | 8    | 4½x4½          | 1    | 1500                         | ---            | ---               | ---          | ---                      | ---                     | 540    |
| A.S.2 .....                    | 20   | 4½x4½          | 2    | 1800                         | ---            | ---               | ---          | ---                      | ---                     | 725    |

| Model Name<br>or Number | H.P. | Bore<br>Stroke | Cyl. | Piston<br>Displ.<br>Cu. Ins. | Max.<br>R.P.M. | Inches            |               |                          |                         | Weight |  |
|-------------------------|------|----------------|------|------------------------------|----------------|-------------------|---------------|--------------------------|-------------------------|--------|--|
|                         |      |                |      |                              |                | Length<br>Overall | Max.<br>Width | Height<br>Above<br>Shaft | Depth<br>Below<br>Shaft |        |  |
| MURPHY                  |      |                |      |                              |                |                   |               |                          |                         |        |  |
| ME-90                   | 90   | 5½x6½          | 4    | 675                          | 1200           | 91                | 39            | 52                       | 11                      | 6500   |  |
| M100                    | 100  | 5½x6½          | 4    | 675                          | 1200           | 91                | 39            | 52                       | 11                      | 6650   |  |
| M110                    | 110  | 6x6½           | 4    | 735                          | 1200           | 91                | 39            | 52                       | 11                      | 6885   |  |
| M115                    | 115  | 5½x6½          | 4    | 675                          | 1200           | 91                | 39            | 52                       | 11                      | 6830   |  |
| M125                    | 125  | 6x6½           | 4    | 735                          | 1200           | 91                | 39            | 52                       | 11                      | 6860   |  |
| M135                    | 135  | 5½x6½          | 6    | 927                          | 1200           | 115               | 38            | 52                       | 9                       | 7990   |  |
| M145                    | 145  | 5½x6½          | 6    | 927                          | 1200           | 115               | 38            | 46                       | 9                       | 8255   |  |
| M150                    | 150  | 5½x6½          | 6    | 1013                         | 1200           | 115               | 38            | 52                       | 9                       | 8000   |  |
| M165                    | 165  | 6x6½           | 6    | 1103                         | 1200           | 115               | 38            | 52                       | 9                       | 8265   |  |
| M170                    | 170  | 5½x6½          | 6    | 1013                         | 1200           | 115               | 38            | 46                       | 9                       | 8265   |  |
| M190                    | 190  | 6x6½           | 6    | 1103                         | 1200           | 115               | 38            | 46                       | 9                       | 8265   |  |

**NORDBERG**

|            |      |        |   |       |      |     |    |    |     |  |       |
|------------|------|--------|---|-------|------|-----|----|----|-----|--|-------|
| 4FS1-CE    | 15   | 4½x5¼  | 1 | ----- | 1800 | 50  | 65 | 41 | --- |  | 1400  |
| 4FS2-CE    | 30   | 4½x5¼  | 2 | ----- | 1800 | 66  | 28 | 41 | --- |  | 2400  |
| FMD-96-R   | 320  | 9x11½  | 6 | ----- | 720  | 175 | 51 | 65 | --- |  | 24000 |
| FMD-97-R   | 370  | 9x11½  | 7 | ----- | 720  | 189 | 51 | 65 | --- |  | 26500 |
| FMD-98-R   | 425  | 9x11½  | 8 | ----- | 720  | 203 | 51 | 65 | --- |  | 29100 |
| FMD-96-RSC | 480  | 9x11½  | 6 | ----- | 720  | 175 | 51 | 73 | --- |  | 25000 |
| FMD-97-RSC | 565  | 9x11½  | 7 | ----- | 720  | 189 | 51 | 73 | --- |  | 27500 |
| FMD-98-RSC | 640  | 9x11½  | 8 | ----- | 720  | 203 | 51 | 73 | --- |  | 30000 |
| FMD-136    | 685  | 13x16½ | 6 | ----- | 514  | 216 | 64 | 84 | --- |  | 47000 |
| FMD-137    | 800  | 13x16½ | 7 | ----- | 514  | 236 | 64 | 84 | --- |  | 51500 |
| FMD-138    | 915  | 13x16½ | 8 | ----- | 514  | 256 | 64 | 84 | --- |  | 56000 |
| FMD-136-SC | 1030 | 13x16½ | 6 | ----- | 514  | 216 | 64 | 92 | --- |  | 49000 |
| FMD-137-SC | 1165 | 13x16½ | 7 | ----- | 514  | 236 | 64 | 92 | --- |  | 52500 |
| FMD-138-SC | 1370 | 13x16½ | 8 | ----- | 514  | 256 | 64 | 92 | --- |  | 57000 |

**OSCO**

|             |    |          |   |     |      |    |    |    |     |  |      |
|-------------|----|----------|---|-----|------|----|----|----|-----|--|------|
| 235D* Herc  | 35 | 4x4.5    | 2 | 113 | 1800 | 45 | 26 | 26 | 9.5 |  | 1027 |
| 470TD* Herc | 70 | 4x4.5    | 4 | 226 | 2400 | 53 | 28 | 25 | 11  |  | 1390 |
| 685TD* Herc | 85 | 3.75x4.5 | 6 | 298 | 2400 | 60 | 28 | 25 | 11  |  | 1455 |

\* Available in direct drive, 2:1 and 3:1 reduction gears.

**PALMER**

|        |    |      |   |     |      |    |    |    |    |  |      |
|--------|----|------|---|-----|------|----|----|----|----|--|------|
| RND-1  | 9  | 4½x6 | 1 | 80  | 1000 | 32 | 25 | 28 | 13 |  | 900  |
| RND-4* | 40 | 4½x6 | 4 | 320 | 1200 | 80 | 28 | 35 | 10 |  | 2900 |
| RND-6* | 60 | 4½x6 | 6 | 480 | 1200 | 96 | 28 | 35 | 10 |  | 3500 |

\*With reduction gear

**RED WING**

|        |     |       |   |      |      |    |    |    |    |  |      |
|--------|-----|-------|---|------|------|----|----|----|----|--|------|
| D-30   | 30  | 3½x3¾ | 4 | 129  | 1800 | 42 | 23 | 20 | 10 |  | 600  |
| D-65   | 65  | 4½x4½ | 4 | 255  | 1900 | 50 | 24 | 25 | 10 |  | 1256 |
| 140-HK | 140 | 4½x4½ | 6 | 525  | 2000 | 72 | 24 | 30 | 12 |  | 1906 |
| D6-160 | 160 | 5½x6  | 6 | 779  | 1400 | 78 | 30 | 27 | 15 |  | 4006 |
| D6-200 | 200 | 6½x6½ | 6 | 1197 | 1300 | 88 | 33 | 32 | 15 |  | 5200 |

**REGAL**

|     |    |       |   |     |      |    |    |    |   |  |     |
|-----|----|-------|---|-----|------|----|----|----|---|--|-----|
| DHB | 30 | 4½x4½ | 2 | 127 | 1800 | 40 | 22 | 13 | 9 |  | 875 |
|-----|----|-------|---|-----|------|----|----|----|---|--|-----|

**SCRIPPS**

|       |     |       |   |     |      |    |     |     |    |  |      |
|-------|-----|-------|---|-----|------|----|-----|-----|----|--|------|
| 4-166 | 55  | 3½x4  | 4 | 166 | 3000 | 43 | 21  | 22¾ | 9  |  | 950  |
| 7000  | 79  | 4½x4½ | 4 | 255 | 2600 | 47 | 22½ | 22  | 10 |  | 1195 |
| 8500  | 84  | 4x4½  | 6 | 298 | 2600 | 54 | 22½ | 22  | 10 |  | 1382 |
| 6-935 | 220 | 5½x6  | 6 | 935 | 2000 | 88 | 25½ | 36  | 18 |  | 4700 |

**SHEPPARD**

|     |     |      |   |       |      |    |    |     |     |  |      |
|-----|-----|------|---|-------|------|----|----|-----|-----|--|------|
| 14C | 544 | 3x4  | 1 | 28    | 2000 | 37 | 26 | 21  | 9   |  | 490  |
| 7   | 8   | 4x5  | 1 | 63    | 1200 | 51 | 31 | --- | --- |  | 2100 |
| 7D  | 9   | 4½x5 | 1 | 71    | 1200 | 51 | 31 | --- | --- |  | 2100 |
| 13C | 30  | 4x5  | 2 | 125.7 | 2000 | 44 | 24 | 27  | 11  |  | 1500 |
| 13F | 33  | 4½x5 | 2 | 141.9 | 2000 | 44 | 24 | 27  | 11  |  | 1500 |
| 6C  | 45  | 4x5  | 3 | 138.5 | 2000 | 52 | 24 | 27  | 11  |  | 1865 |
| 6F  | 50  | 4½x5 | 3 | 212.8 | 2000 | 52 | 24 | 27  | 11  |  | 1865 |
| 12C | 90  | 4x5  | 6 | 377   | 2000 | 71 | 25 | 30  | 13  |  | 2100 |
| 12F | 100 | 4½x5 | 6 | 425.6 | 2000 | 71 | 25 | 30  | 13  |  | 2100 |

**STAR**

|               |     |       |   |     |      |    |    |    |    |  |      |
|---------------|-----|-------|---|-----|------|----|----|----|----|--|------|
| Emperor 2D30  | 30  | 4½x4½ | 2 | 127 | 1800 | 42 | 25 | 21 | 10 |  | 865  |
| Emperor 4D75  | 70  | 4½x4½ | 4 | 255 | 2600 | 49 | 25 | 23 | 10 |  | 1150 |
| Emperor 6D85  | 85  | 3½x4½ | 6 | 298 | 2600 | 56 | 27 | 24 | 10 |  | 1350 |
| Emperor 6D180 | 175 | 5x6   | 6 | 707 | 2100 | 77 | 32 | 32 | 14 |  | 3100 |
| Emperor 6D280 | 205 | 5½x6  | 6 | 935 | 2100 | 85 | 37 | 36 | 10 |  | 4500 |

| Model Name<br>or Number | H.P. | Bore<br>Stroke | Cyl. | Piston<br>Displ.<br>Cu. Ins. | Max.<br>R.P.M. | Inches            |               |                          |                         | Weight |
|-------------------------|------|----------------|------|------------------------------|----------------|-------------------|---------------|--------------------------|-------------------------|--------|
|                         |      |                |      |                              |                | Length<br>Overall | Max.<br>Width | Height<br>Above<br>Shaft | Depth<br>Below<br>Shaft |        |
| SUPERIOR                |      |                |      |                              |                |                   |               |                          |                         |        |
| 40-M-6                  | 325  | 8½x10½         | 6    |                              | 900            |                   |               |                          |                         | 14500  |
| 40-M-8                  | 435  | 8½x10½         | 8    |                              | 900            |                   |               |                          |                         | 17000  |
| 40-MX-6                 | 490  | 8½x10½         | 6    |                              | 900            |                   |               |                          |                         | 15500  |
| 40-MX-8                 | 450  | 8½x10½         | 8    |                              | 900            |                   |               |                          |                         | 18000  |
| 50-M-6                  | 300  | 9x12           | 6    |                              | 650            |                   |               |                          |                         | 20000  |
| 50-M-8                  | 400  | 9x12           | 8    |                              | 650            |                   |               |                          |                         | 24000  |
| 50-MX-6                 | 450  | 9x12           | 6    |                              | 650            |                   |               |                          |                         | 21000  |
| 50-MX-8                 | 600  | 9x12           | 8    |                              | 650            |                   |               |                          |                         | 25000  |
| 60-M-6                  | 515  | 12x15          | 6    |                              | 500            |                   |               |                          |                         | 39000  |
| 60-M-8                  | 685  | 12x15          | 8    |                              | 500            |                   |               |                          |                         | 45000  |
| 60-MX-6                 | 770  | 12x15          | 6    |                              | 500            |                   |               |                          |                         | 40000  |
| 60-MX-8                 | 1030 | 12x15          | 8    |                              | 500            |                   |               |                          |                         | 47500  |
| 80-M-6                  | 720  | 14½x20         | 6    |                              | 360            |                   |               |                          |                         | 68000  |
| 80-M-8                  | 960  | 14½x20         | 8    |                              | 360            |                   |               |                          |                         | 83000  |
| 80-MX-6                 | 1080 | 14½x20         | 6    |                              | 360            |                   |               |                          |                         | 72000  |
| 80-MX-8                 | 1440 | 14½x20         | 8    |                              | 360            |                   |               |                          |                         | 90000  |

Note: "X" in model indicates supercharged.

|              |      |        |   |       |      |     |     |     |    |        |
|--------------|------|--------|---|-------|------|-----|-----|-----|----|--------|
| <b>UNION</b> |      |        |   |       |      |     |     |     |    |        |
| 298          | 47   | 3¾x4½  | 6 | 298   | 1800 | 46  | 26  | 20  | 13 | 1450   |
| 474          | 76   | 4¾x5¾  | 6 | 474   | 1800 | 46  | 28  | 25  | 13 | 2325   |
| 935          | 149  | 5¾x6   | 6 | 935   | 1800 | 60  | 27  | 32  | 14 | 4360   |
| GAS          | 225  | 8½x11  | 6 | 3780  | 600  | 119 | 34  | 55  | 13 | 12500  |
| GAS          | 300  | 8½x11  | 8 | 4980  | 600  | 148 | 34  | 57  | 13 | 16000  |
| L6           | 300  | 10x14  | 6 | 6600  | 470  | 135 | 42  | 68  | 17 | 20000  |
| L6*          | 450  | 10x14  | 6 | 6800  | 470  | 135 | 42  | 68  | 17 | 21000  |
| L8           | 400  | 10x14  | 8 | 8800  | 470  | 171 | 42  | 68  | 17 | 26000  |
| L8*          | 600  | 10x14  | 8 | 8800  | 470  | 171 | 42  | 68  | 17 | 26500  |
| P6           | 500  | 12x15  | 6 | 10200 | 500  | 202 | 46½ | 74  | 19 | 36500  |
| P6*          | 775  | 12x15  | 6 | 10200 | 500  | 202 | 46½ | 74  | 19 | 38000  |
| P8           | 675  | 12x15  | 8 | 13600 | 500  | 243 | 46½ | 74  | 19 | 46000  |
| P8*          | 1000 | 12x15  | 8 | 13600 | 500  | 246 | 46½ | 74  | 19 | 48000  |
| V6           | 700  | 14x19  | 6 | 17500 | 400  | 185 | 57  | 92  | 22 | 53000  |
| V6*          | 1000 | 14x19  | 6 | 17500 | 400  | 185 | 57  | 92  | 22 | 54500  |
| V8           | 925  | 14x19  | 8 | 23300 | 400  | 239 | 57  | 92  | 22 | 70000  |
| V8*          | 1375 | 14x19  | 8 | 23300 | 400  | 239 | 57  | 92  | 22 | 72000  |
| Z6           | 750  | 16x20½ | 6 | 24750 | 300  | 203 | 62  | 101 | 24 | 80000  |
| Z6*          | 1125 | 16x20½ | 6 | 24750 | 300  | 203 | 62  | 101 | 24 | 81500  |
| Z8           | 1000 | 16x20½ | 8 | 33000 | 300  | 259 | 62  | 101 | 24 | 99000  |
| Z8*          | 1500 | 16x20½ | 8 | 33000 | 300  | 259 | 62  | 101 | 24 | 100000 |

\* Supercharged

|                   |     |         |   |     |      |      |      |      |      |        |
|-------------------|-----|---------|---|-----|------|------|------|------|------|--------|
| <b>WASHINGTON</b> |     |         |   |     |      |      |      |      |      |        |
| 3-125             | 90  | 9x12½   | 3 | 400 | .... | .... | .... | .... | .... | 13500  |
| 4-125             | 120 | 9x12½   | 4 | 400 | .... | .... | .... | .... | .... | 14700  |
| 5-125             | 150 | 9x12½   | 5 | 400 | .... | .... | .... | .... | .... | 16500  |
| 6-125             | 200 | 9x12½   | 6 | 450 | .... | .... | .... | .... | .... | 18000  |
| 8-125             | 270 | 9x12½   | 8 | 450 | .... | .... | .... | .... | .... | 21000  |
| 3-13              | 120 | 10¼x13½ | 3 | 390 | .... | .... | .... | .... | .... | 15000  |
| 4-13              | 160 | 10¼x13½ | 4 | 360 | .... | .... | .... | .... | .... | 18500  |
| 6-13              | 260 | 10¼x13½ | 6 | 390 | .... | .... | .... | .... | .... | 23000  |
| 8-13              | 350 | 10¼x13½ | 8 | 390 | .... | .... | .... | .... | .... | 26500  |
| 4-15              | 200 | 11½x15  | 4 | 327 | .... | .... | .... | .... | .... | 27000  |
| 6-15              | 330 | 11½x15  | 6 | 360 | .... | .... | .... | .... | .... | 31500  |
| 8-15              | 440 | 11½x15  | 8 | 360 | .... | .... | .... | .... | .... | 40500  |
| 6-160             | 400 | 12¾x16  | 6 | 360 | .... | .... | .... | .... | .... | 42000  |
| 8-160             | 550 | 12¾x16  | 8 | 360 | .... | .... | .... | .... | .... | 53000  |
| 6-18              | 500 | 14½x18  | 6 | 300 | .... | .... | .... | .... | .... | 62500  |
| 8-18              | 665 | 14½x18  | 8 | 300 | .... | .... | .... | .... | .... | 80000  |
| 6-20              | 640 | 16x20   | 6 | 277 | .... | .... | .... | .... | .... | 82000  |
| 8-20              | 850 | 16x20   | 8 | 277 | .... | .... | .... | .... | .... | 105000 |

| WORTHINGTON |      |       |   |     |     |    |    |    |       |  |
|-------------|------|-------|---|-----|-----|----|----|----|-------|--|
| BEM-5*      | 125  | 8x10½ | 5 | 500 | 144 | 43 | 54 | 15 | 13400 |  |
| BEM-6*      | 150  | 8x10½ | 6 | 500 | 159 | 43 | 54 | 15 | 15700 |  |
| DHM-5†      | 480  | 12x14 | 5 | 600 | 212 | 48 | 83 | 24 | 33500 |  |
| DHM-6†      | 575  | 12x14 | 6 | 600 | 236 | 48 | 83 | 24 | 39500 |  |
| DHM-7†      | 670  | 12x14 | 7 | 600 | 256 | 48 | 83 | 24 | 46000 |  |
| DHM-8†      | 765  | 12x14 | 8 | 600 | 283 | 48 | 83 | 24 | 51500 |  |
| SDHM-5†     | 720  | 12x14 | 5 | 600 | 229 | 48 | 90 | 24 | 43300 |  |
| SDHM-6†     | 865  | 12x14 | 6 | 600 | 247 | 48 | 90 | 24 | 47600 |  |
| SDHM-7†     | 1010 | 12x14 | 7 | 600 | 267 | 48 | 90 | 24 | 54600 |  |
| SDHM-8†     | 1155 | 12x14 | 8 | 600 | 296 | 48 | 90 | 24 | 61300 |  |

\*Direct-drive clutch reverse.

†Reverse & reduction-gear drive.



# MARINE ENGINE MANUFACTURERS

## Gasoline - Diesel - Outboards

- Arnolt Motor Division, Arnolt Corp.**  
Warsaw, Ind.
- Barr Marine Products Co.**  
2702 E. Castor Ave., Philadelphia 34, Pa.
- Brennan Motor Mfg. Co.**  
101 Townsend St., Syracuse, N. Y.
- Buda Company**  
154th and Commercial, Harvey, Ill.
- Caterpillar Tractor Co.**  
Peoria, Ill.
- Champion Motors Co.**  
1433 Stinson Blvd., Minneapolis, Minn.
- Chris-Craft Corporation**  
Algonac, Mich.
- Chris-Craft Outboard Motors**  
Grand Rapids, Mich.
- Chrysler Corp., Marine Engine Division**  
12200 E. Jefferson Ave., Detroit, Mich.
- Cleveland Diesel Engine Division**  
**General Motors Corp.**  
Cleveland, Ohio
- Clinton Machine Co., Inc.**  
Clinton, Mich.
- Cooper-Bessemer Corp.**  
Mount Vernon, Ohio
- Corsair Outboard Motor Co.**  
2700 Winter St., Minneapolis, Minn.
- Crosley Motors**  
2530 Spring St., Cincinnati, Ohio
- Cummins Engine Company, Inc.**  
Columbus, Ind.
- Detroit Diesel Engine Division**  
**General Motors Corp.**  
Detroit 28, Mich.
- Du Brie Motor Co.**  
20500 Woodward Ave., Detroit 3, Mich.
- Enterprise Engine & Foundry Co.**  
2902 19th St., San Francisco 10, Calif.
- Evinrude Motors**  
Milwaukee, Wis.
- Fairbanks-Morse & Co.**  
600 S. Michigan Ave., Chicago 5, Ill.
- Federal Marine Motors Co.**  
9011 Cottage Grove Ave., Chicago 19, Ill.
- Firestone Tire & Rubber Co.**  
1200 Firestone Parkway, Akron, Ohio
- Flagship Engine Co.**  
Baltimore 22, Md.
- Gershel, Arthur**  
51 Chambers St., New York 7, N. Y.
- Gladden Products Corp.**  
635 W. Colorado Blvd., Glendale 4, Calif.
- Gray Marine Motor Company**  
710 Canton Ave., Detroit 7, Mich.
- Hallett Manufacturing Co.**  
1601 West Florence Ave., Inglewood, Calif.
- Hall-Scott Motor Division of ACF-Brill Motors Company**  
Berkeley, Calif.
- Harnischfeger Corp., Diesel Engine Div.**  
Port Washington, Wis.
- Johnson Motors**  
Waukegan, Ill.
- Kahlenberg Brothers Company**  
Two Rivers, Wis.
- Kermath Manufacturing Co.**  
5878 Commonwealth Ave., Detroit 8, Mich.
- The Kiekhaefer Corp. — (Mercury)**  
Fond du Lac, Wisc.
- Lathrop Engine Co.**  
Mystic, Conn.
- Lauson Company**  
New Holstein, Wis.
- Lister-Blackstone, Inc.**  
420 Lexington Ave., New York 17, N. Y.
- Martin Motors**  
Eau Claire, Wis.
- Metal Products Corp. (Flambeau)**  
245 E. Keefe Ave., Milwaukee 12, Wis.
- Mercury — See Kiekhaefer Corp.**
- Michigan Marine Motor Co.**  
Coldwater, Mich.
- Montgomery Ward & Co. (Sea King)**  
619 W. Chicago Ave., Chicago, Ill.
- Murphy Diesel Company**  
5324 W. Burnham, Milwaukee, Wis.
- National Supply Company, Engine Division**  
Springfield, Ohio
- Nordberg Manufacturing Company**  
3073 S. Chase Ave., Milwaukee 7, Wis.
- Oasco Motors Corp.**  
3827 N. Lawrence St., Philadelphia 4, Penn.
- Packard Motor Car Co.**  
1580 East Grand Blvd., Detroit 32, Mich.
- Palmer Brothers Engine Corp.**  
Cos Cob, Conn.
- Red Wing Motor Company**  
Red Wing, Minn.
- Regal Manufacturing Co.**  
Coldwater, Mich.
- Sea King — See Montgomery Ward & Co.**
- Scott-Atwater Mfg., Inc.**  
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- Scripps Motor Co.**  
5817 Lincoln Ave., Detroit 8, Mich.
- R. H. Sheppard Co., Inc.**  
Hanover, Pa.
- Sterling Engine Co.**  
1270 Niagara St., Buffalo 13, N. Y.
- Star Marine Engine Works**  
851-98th Ave., Oakland 3, Calif.
- The Union Diesel Engine Company**  
2200 E. Seventh St., Oakland 6, Calif.
- United States Motors Corp.**  
Oshkosh, Wis.
- Universal Motor Company**  
347 Universal Drive, Oshkosh, Wis.
- Vimalert Company, Ltd.**  
807 Garfield Ave., Jersey City 5, N. J.
- Vivian Diesel Engine Co.**  
1090 6th Ave., Vancouver, B. C.
- Washington Iron Works**  
1500 6th Ave. South, Seattle 4, Wash.
- West Bend Aluminum Co. (Elgin)**  
Hartford, Wis.
- Wisconsin Motor Corp.**  
1910 S. 53rd, Milwaukee, Wis.
- Worthington Pump & Machinery Corp.**  
Harrison, N. J.

# WHERE TO GET CHARTS

Agents marked with an asterisk (\*) also handle certain U. S. Hydrographic Office publications. Agents marked with a dagger (†) also handle U. S. Coast Guard publications.

## California

**Berkeley:** \*Hinds Boat Supply, 801 University Ave.

**Crescent City:** Nielson Hardware & Electric Co.

**Eureka:** †C. O. Lincoln & Co., 615 Fifth St.  
**Long Beach:** \*Globe Nautical Instrs. Co., 217 E. First St.

**Los Angeles:** Pan American Navigational Service, 12021 Ventura Boulevard

\*U. S. Coast and Geodetic Survey District Office, 1426 Federal Building

\*The A. Lietz Co., 913 South Grand Ave.

**Monterey:** †Cincotta Brothers, 203 Alvarado St.

**Morro Bay:** Morro Bay Supply  
**Newport Beach:** South Coast Co., 2212 Central St.

**Balboa Marine Hardware Co.,** 911 Coast Highway

**North Hollywood:** Pan-American Navigation Service, 12021 Ventura Blvd.

**Oakland:** Harbor Marine Supply, 370 11th St.

**Pittsburg:** Pittsburg Yacht Harbor, 5 Cutter St.

**San Diego:** †Arey-Jones Co., 933 Fourth St.  
Nuttall-Styris Co., 825 Columbia St.

**San Francisco:** U. S. Coast and Geodetic Survey District Office, 114 Customhouse

\*Geo. E. Butler Co., Alaska Commercial Building, 356 California St.

\*A. Lietz Co., 320 Montgomery St.

\*C. J. Hendry Co., 27 Main St.

**San Francisco Instrument Co.,** 510 Battery St.

**San Pedro:** †Marine Hardware Co., 509 Beacon St.

†C. J. Hendry Co., 111-121 S. Front St.

\*Southwest Instrument Co., 346 West Seventh St.

**San Rafael:** Marin Yacht Sales, 101 Third St.

**Santa Barbara:** \*Ott's, 727 State St.

**Sausalito:** Bauman Bros. Yacht Service, Sausalito Yacht Harbor.

**Stockton:** Morris Bros., 15 N. Hunter St.

**Vallejo:** Clifford M. Hewitt, Vallejo Boat Center, 823 Wilson Ave.

## Oregon

**Astoria:** \*The Beebe Co., 587 Bond St.

**Cos Bay:** Independent Stevedore Co., Inc.

**Newport:** Englund Marine Supply

**North Bend:** Oregon Pacific Co., Inc.

**Portland:** U. S. Coast and Geodetic Survey District Office, Panama Building, 534 S. W. Third Ave.

\*The Beebe Co., 504-510 S. W. First Ave.

\*Frank H. Parks, 213 S. W. Washington St.

\*Portland Instrument Co., 334 S. W. Fifth Ave.

## Washington

**Anacortes:** Marine Supply and Hardware Transmission Supply, 420 Commercial

**Bellingham:** Griggs, Stationers and Printers, 120 East Holly St.

**Bellingham Marine Supply,** 14 Squalicum Fall

**Everett:** Black and King, 2930 Colby Ave.

**Friday Harbor:** Friday Harbor Drug Co.

**Hoquiam:** Harbor Marine Supply, Inc., 912 J St.

**Neah Bay:** Washburn's General Merchandise Olympia: The Marina

**Port Angeles:** †Willson Hardware Co., 111 W. First St.

**Seattle:** U. S. Coast and Geodetic Survey District Office, 705 Federal Office Bldg.

\*Max Kuner Co., 61 Marion St. Viaduct Marina Mart, Inc., 1500 Westlake Ave., N.

\*Pacific Marine Supply Co., 1223 Western Ave.

\*Northwest Instrument Co., Inc., 2313 Third Ave.

Shrock The Compass Adjustor, Fisherman's Dock

Shrock The Compass Adjustor, 1117 E. Northlake Ave.

Charles F. Metsker, 1020 Third Ave.

**Tacoma:** †The Stationers, Inc., 926 Pacific Ave.

\*Steven Marine Supply, 734 Broadway

## Alaska

**Anchorage:** Alaska Map Service

**Cordova:** Cordova Drug Co.

**Craig:** J. L. Lucier

**Hoonah:** P. S. Ganty

**Juneau:** †The Hayes Shop

**Northern Commercial Co.**

**Ketchikan:** †Ryus Drug Co.

\*Ketchikan Instrument Co., 416 Water St.

**Kodiak:** Donnelly and Acheson

**Pelican:** Pelican Cold Storage Co.

**Petersburg:** The Trading Union, Inc.

**Seldovia:** M. S. Young Mercantile Co.

**Seward:** Alaska Shop

**J. Vic Brown & Sons**

**Sitka:** Sitka Arts & Crafts

**Valdez:** Valdez Drug Co., Inc.

**Wrangell:** †Campbell Brothers

## Hawaii

**Honolulu:** U. S. Coast and Geodetic Survey District Office, Federal Office Bldg.

\*McWayne Marine Supply Co., 214 Merchant St.

## Canada

**Vancouver, B. C.:** \*R. F. Bovey, Ltd., 330 Burrard St.

\*The Clark & Stuart Co., Ltd., 550 Seymour St.

**Kelvin, Bottomley & Baird (Canada), Ltd.,** 1505 West Pender

\*Edward Lipssett, Ltd., 68 Water St.

**Victoria, B. C.:** \*Diggon-Hibben, Ltd., 1401 Government Street.

## U. S. NAVY BRANCH HYDROGRAPHIC OFFICES

### California

**San Francisco:** 200-219 Customhouse

**San Pedro:** Officer in Charge, Room 206 Federal Bldg., 9th and Beacon Sts

### Oregon

**Portland:** Officer in Charge, Room 211, U. S. Courthouse.

### Washington

**Seattle:** Officer in Charge, Room 453, Federal Office Bldg.

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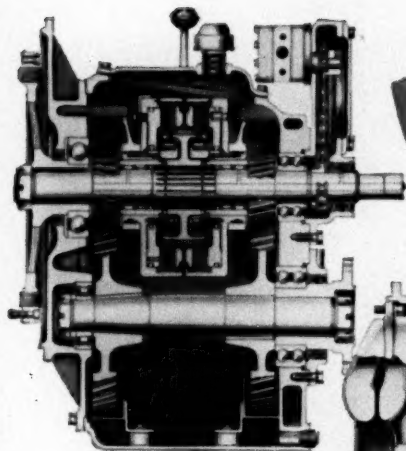
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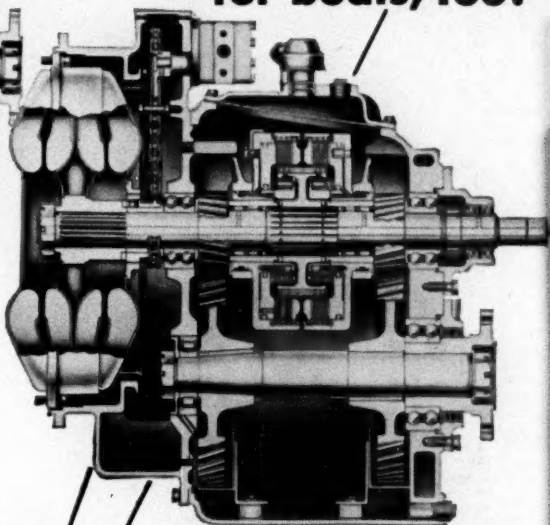


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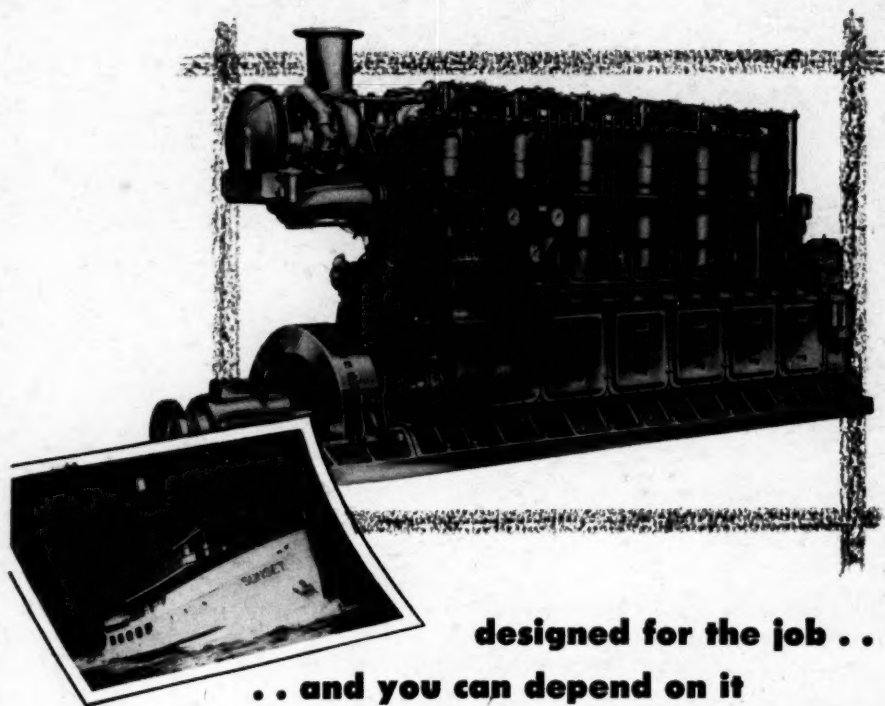
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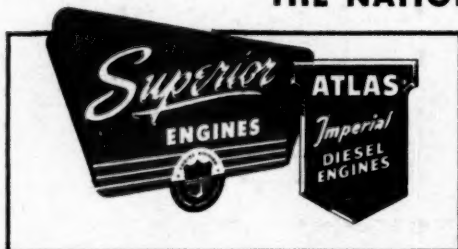
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